

FIG.1 (Prior Art)

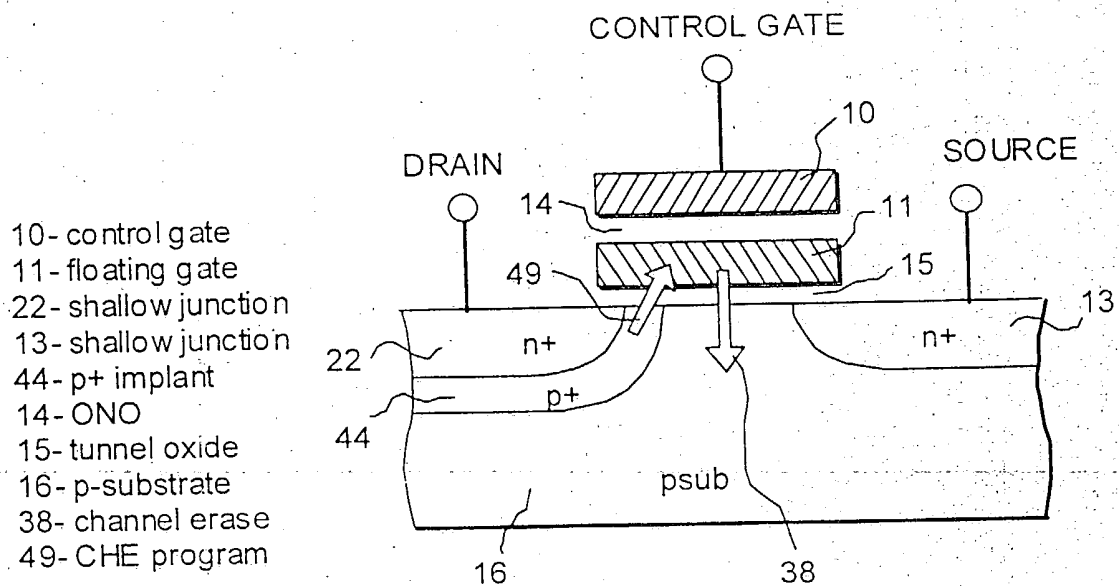


FIG.2(Prior Art)

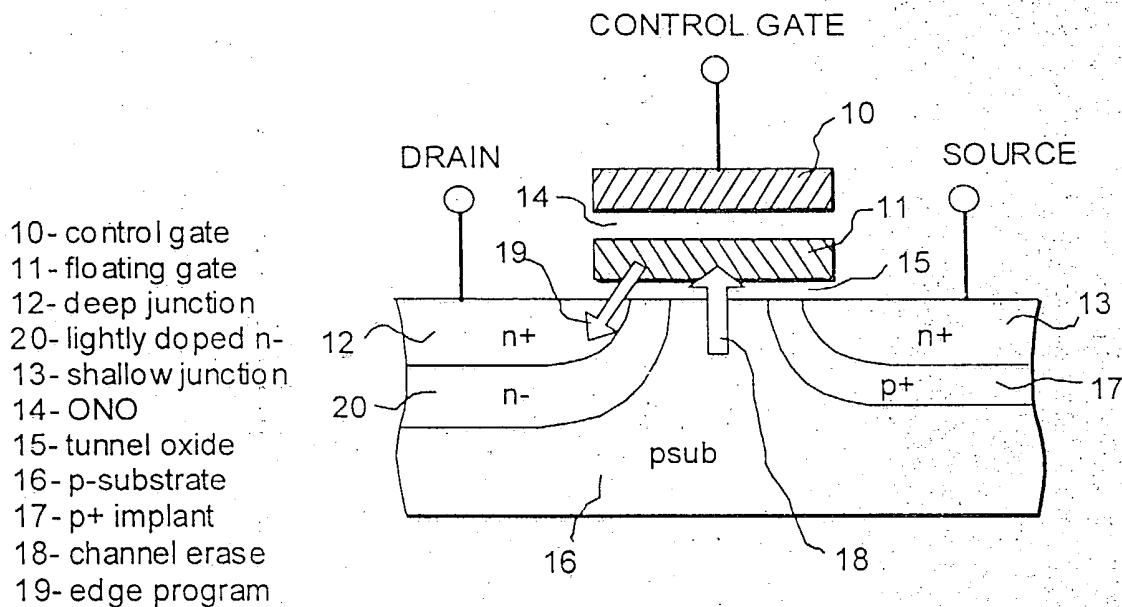


FIG.3 (Prior Art)

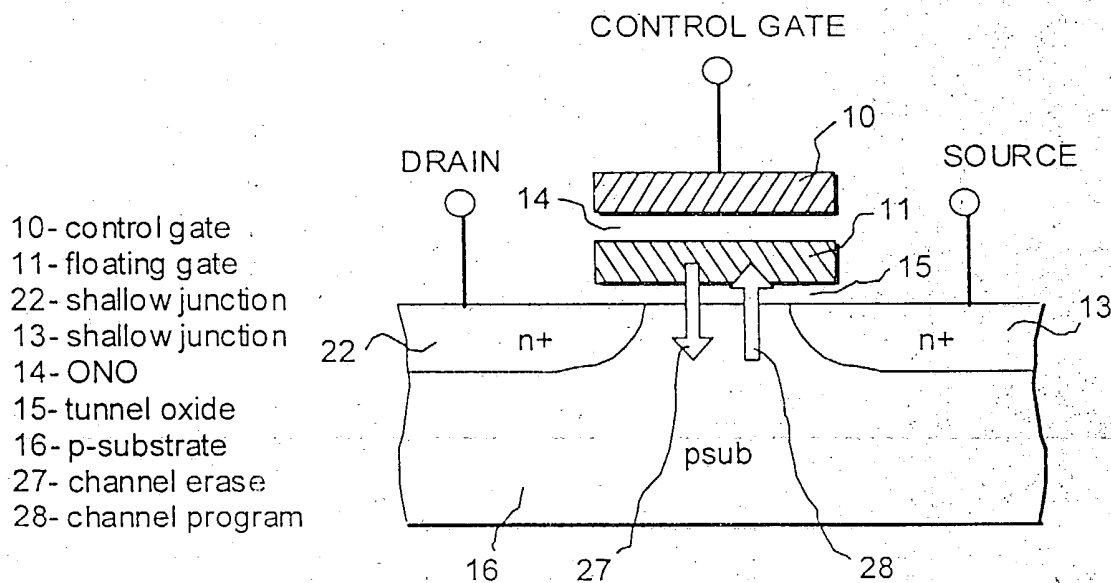
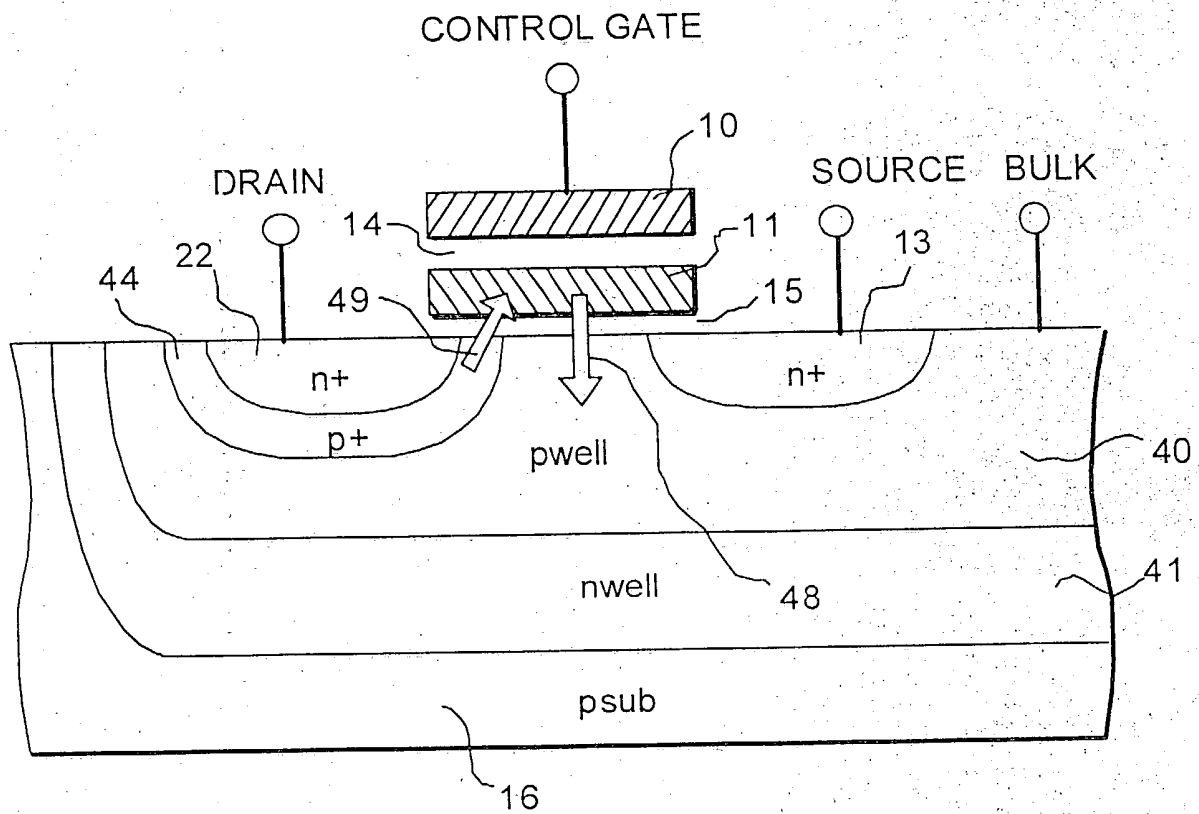


FIG.4 (Prior Art)



- 10- control gate
- 11- floating gate
- 22- shallow junction
- 13- shallow junction
- 44- p+ implant
- 14- ONO
- 15- tunnel oxide
- 38- channel erase
- 49- CHE program
- 40- p-well
- 41- deep n-well
- 16- p-substrate

FIG.5 (Prior Art)

ETOX NOR Cell on a P-substrate

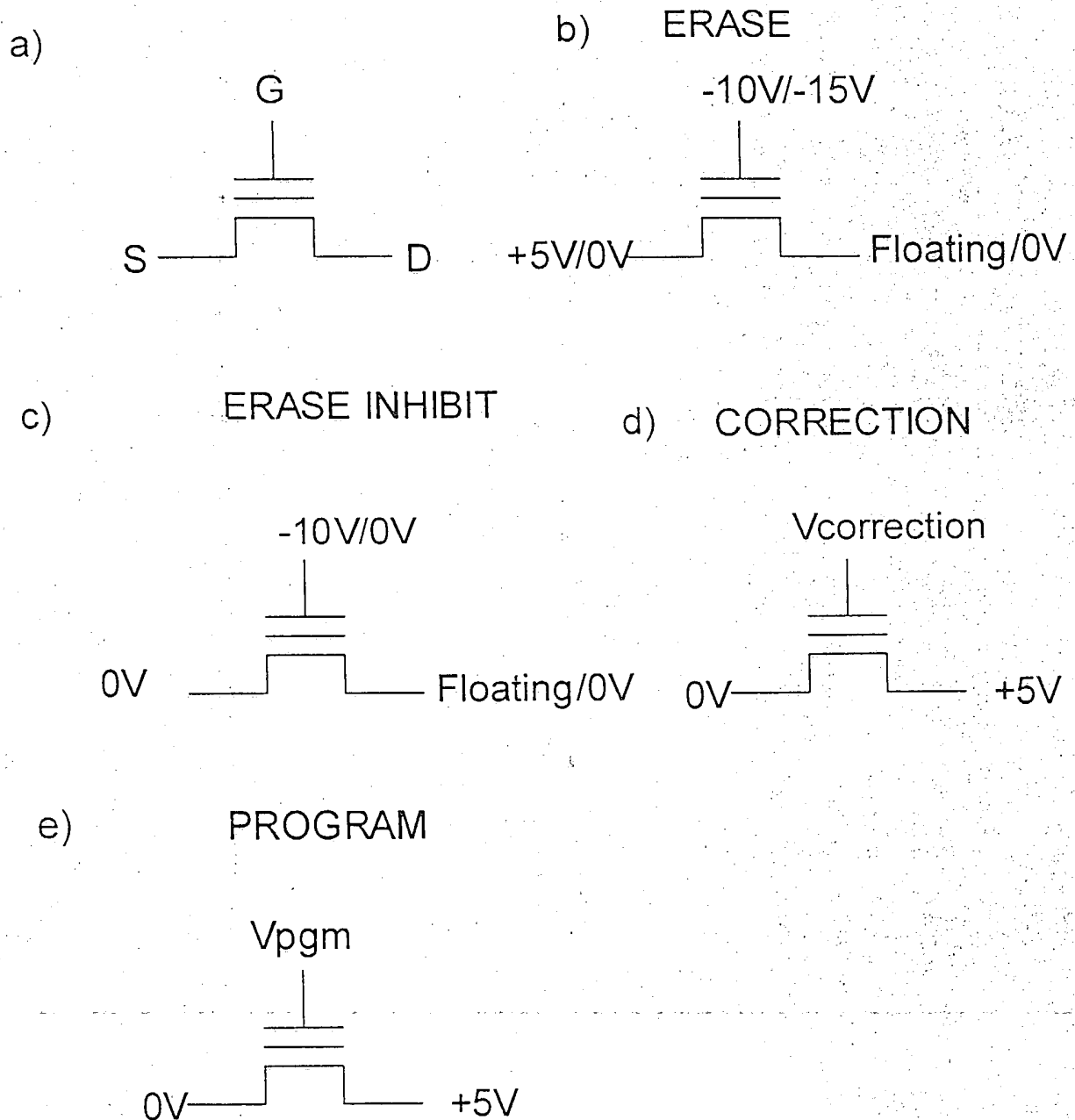
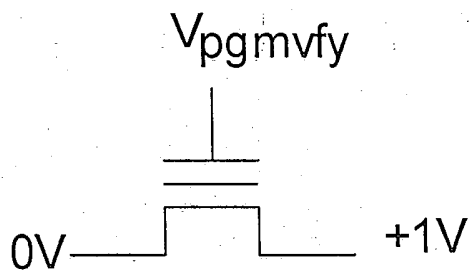


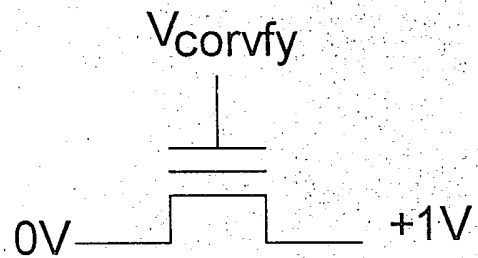
FIG. 6

ETOX NOR Cell on a P-substrate

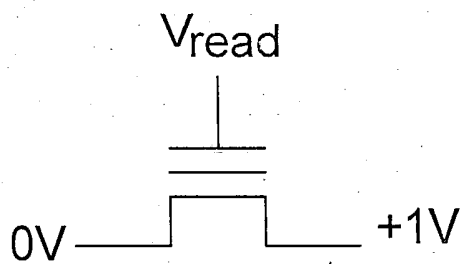
a) PROGRAM VERIFY



b) CORRECTION
VERIFY



c) READ



d) ERASE VERIFY

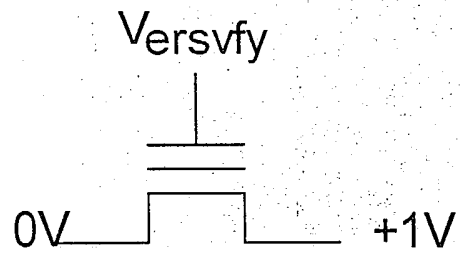


FIG. 7

ETOX NOR Cell on a P-substrate

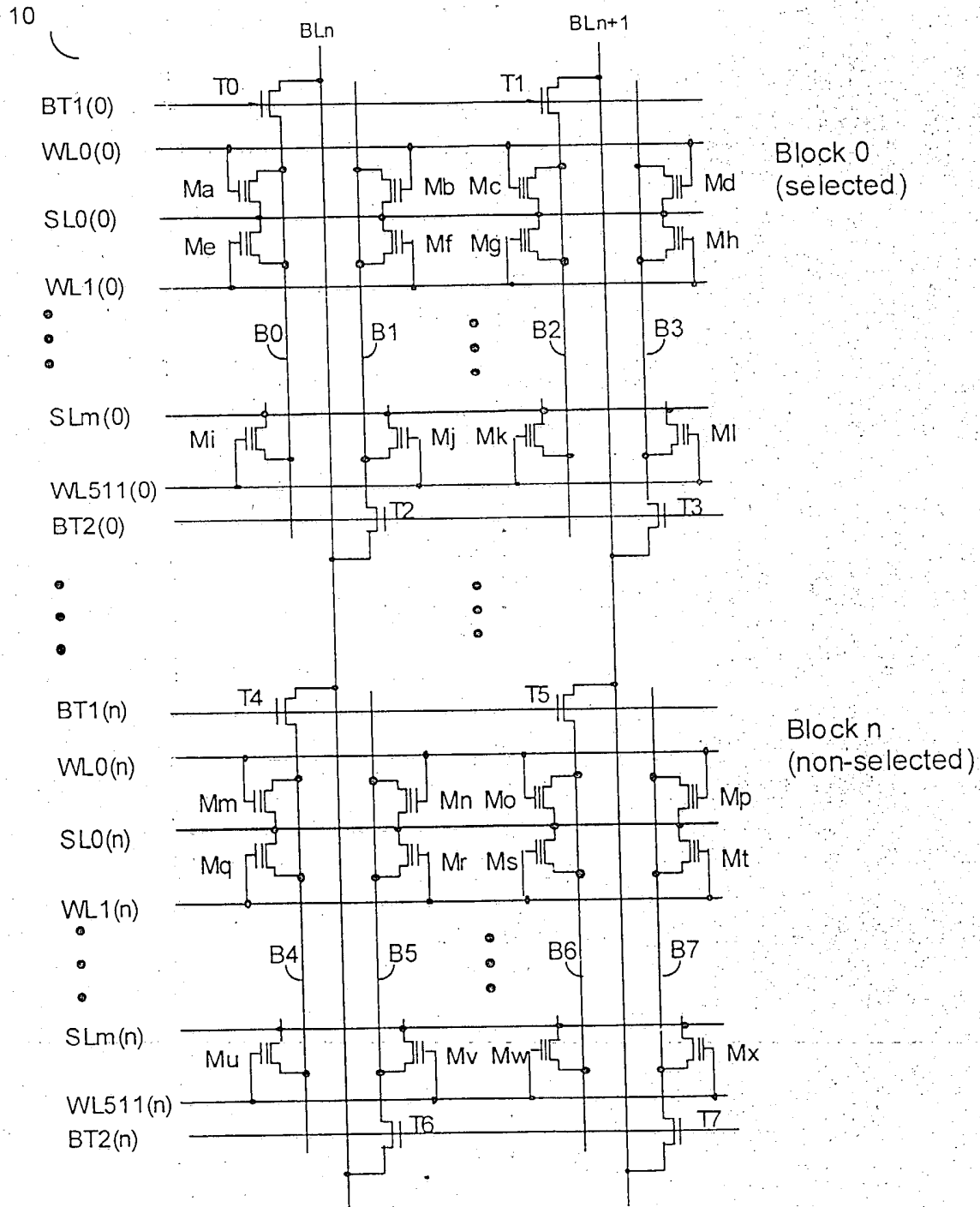


FIG.8

Block Erase Operations

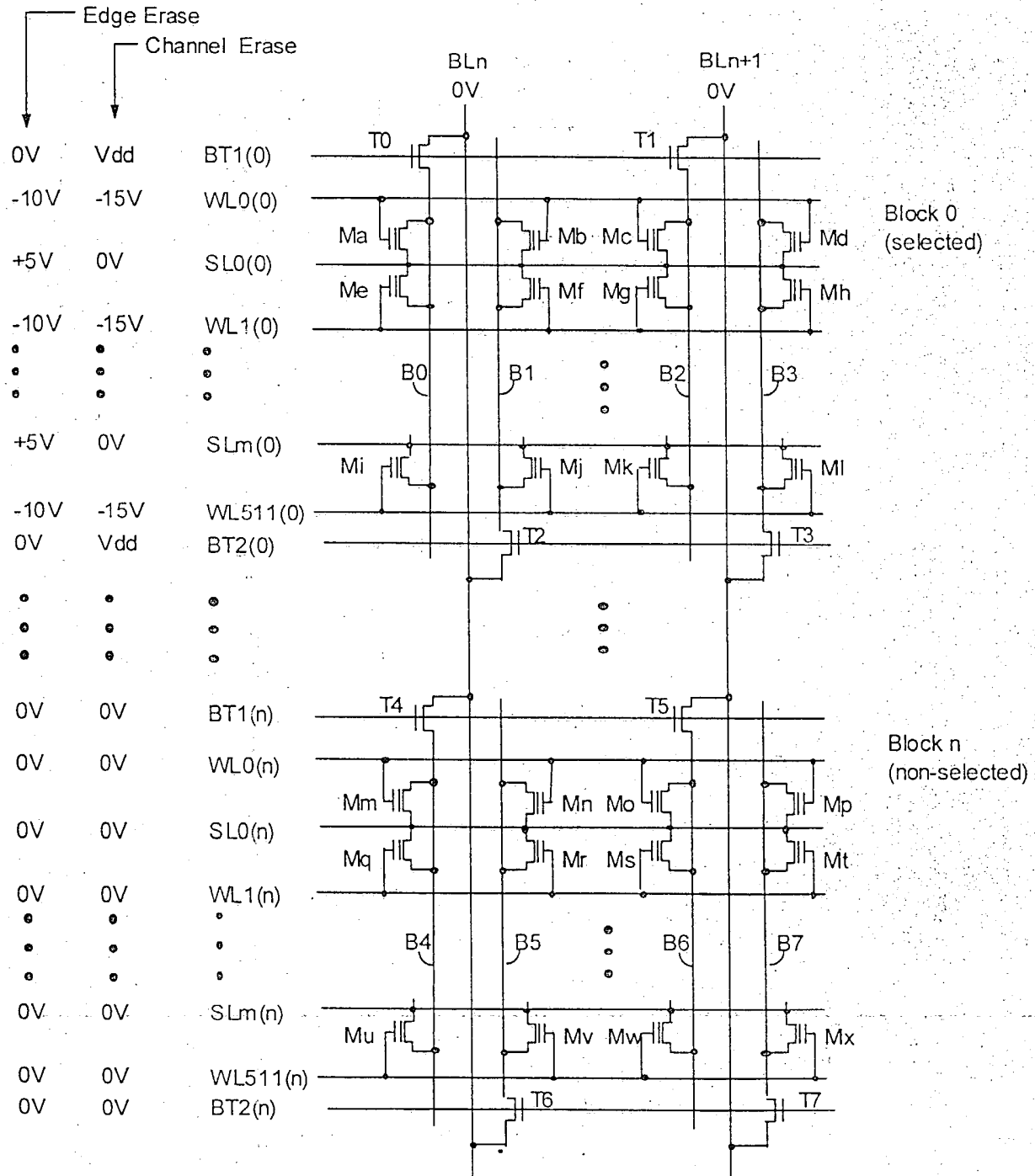


FIG. 9

Block Erase Verify

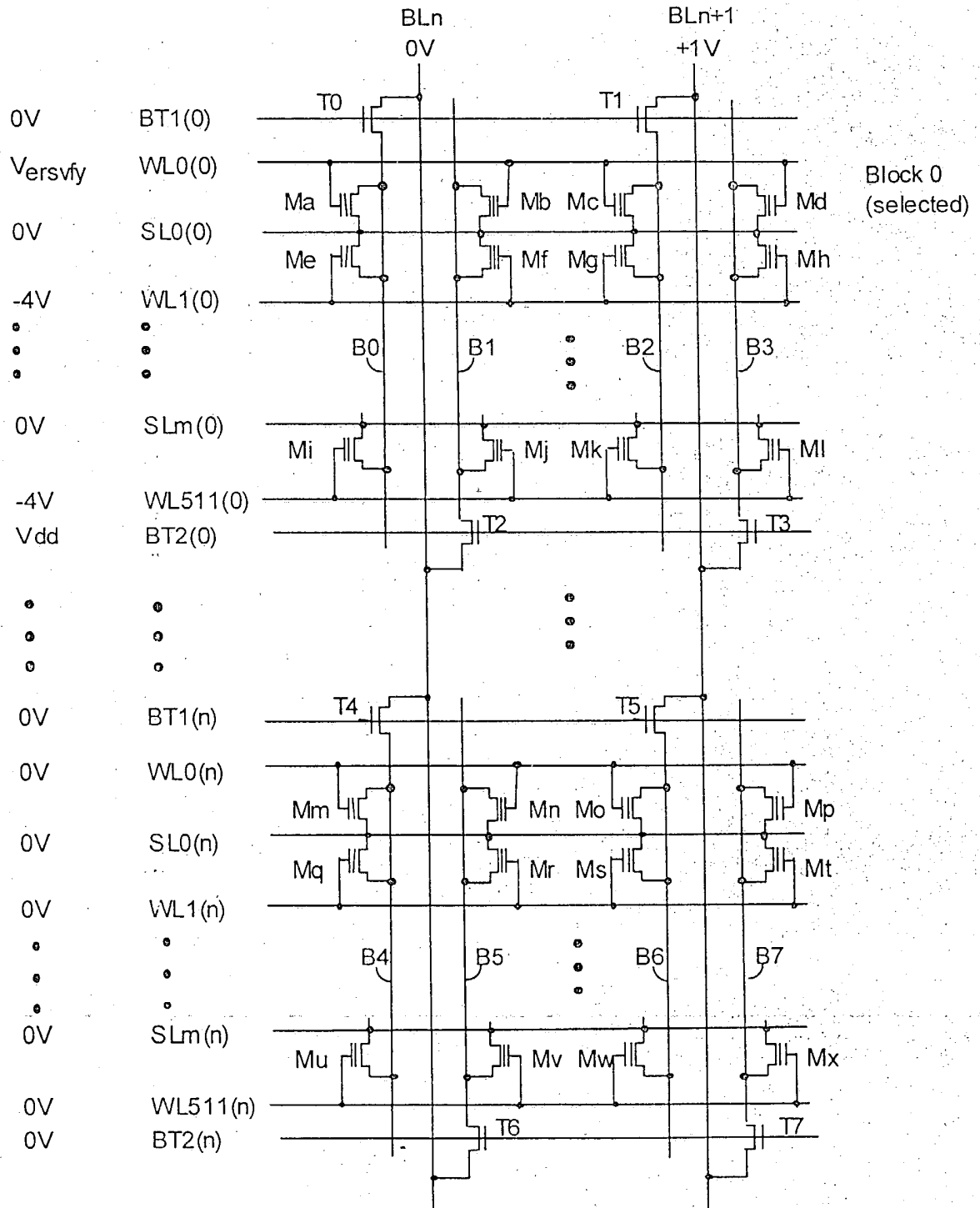


FIG.10

Erase Inhibit

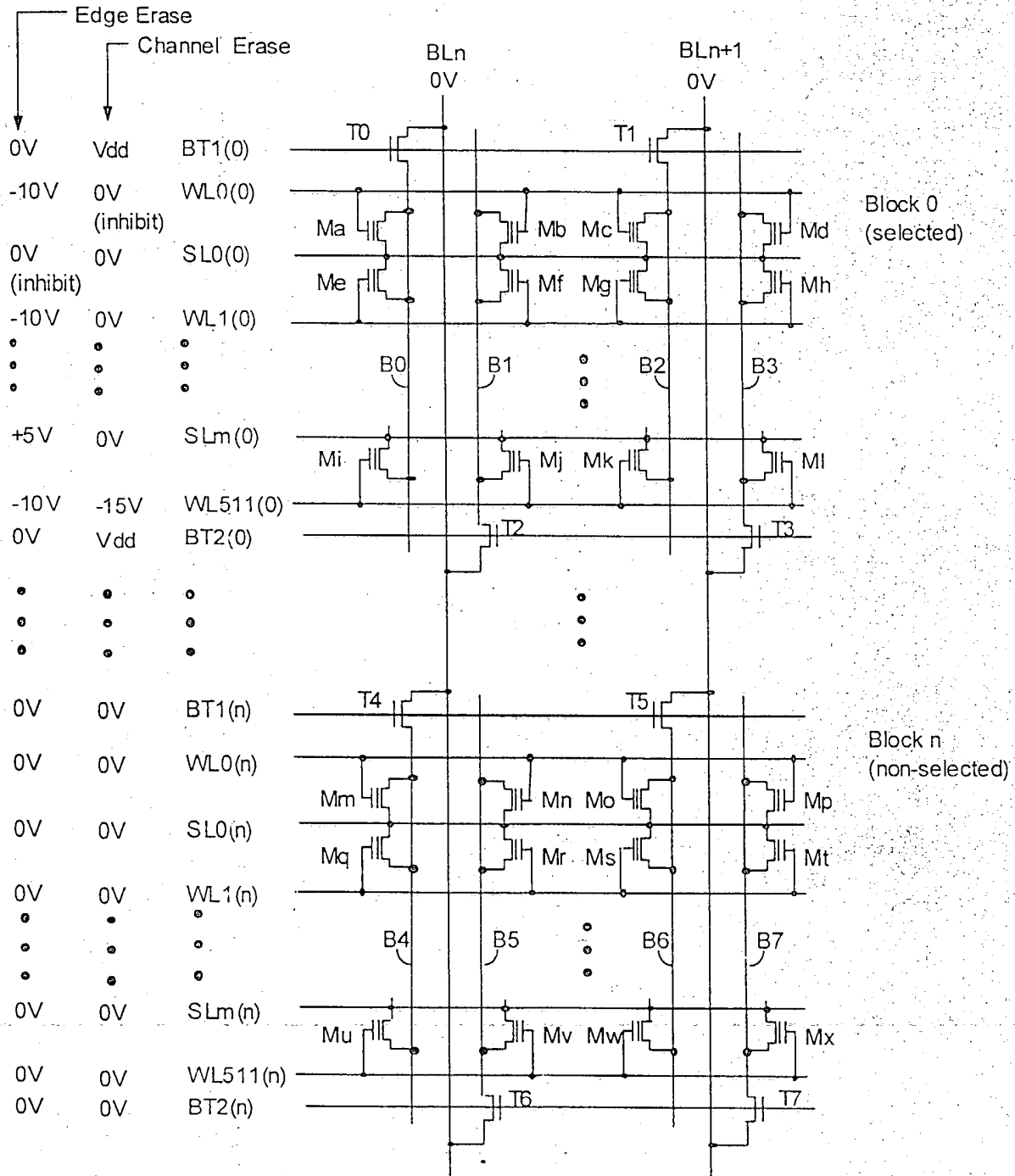


FIG. 11

Correction Operations

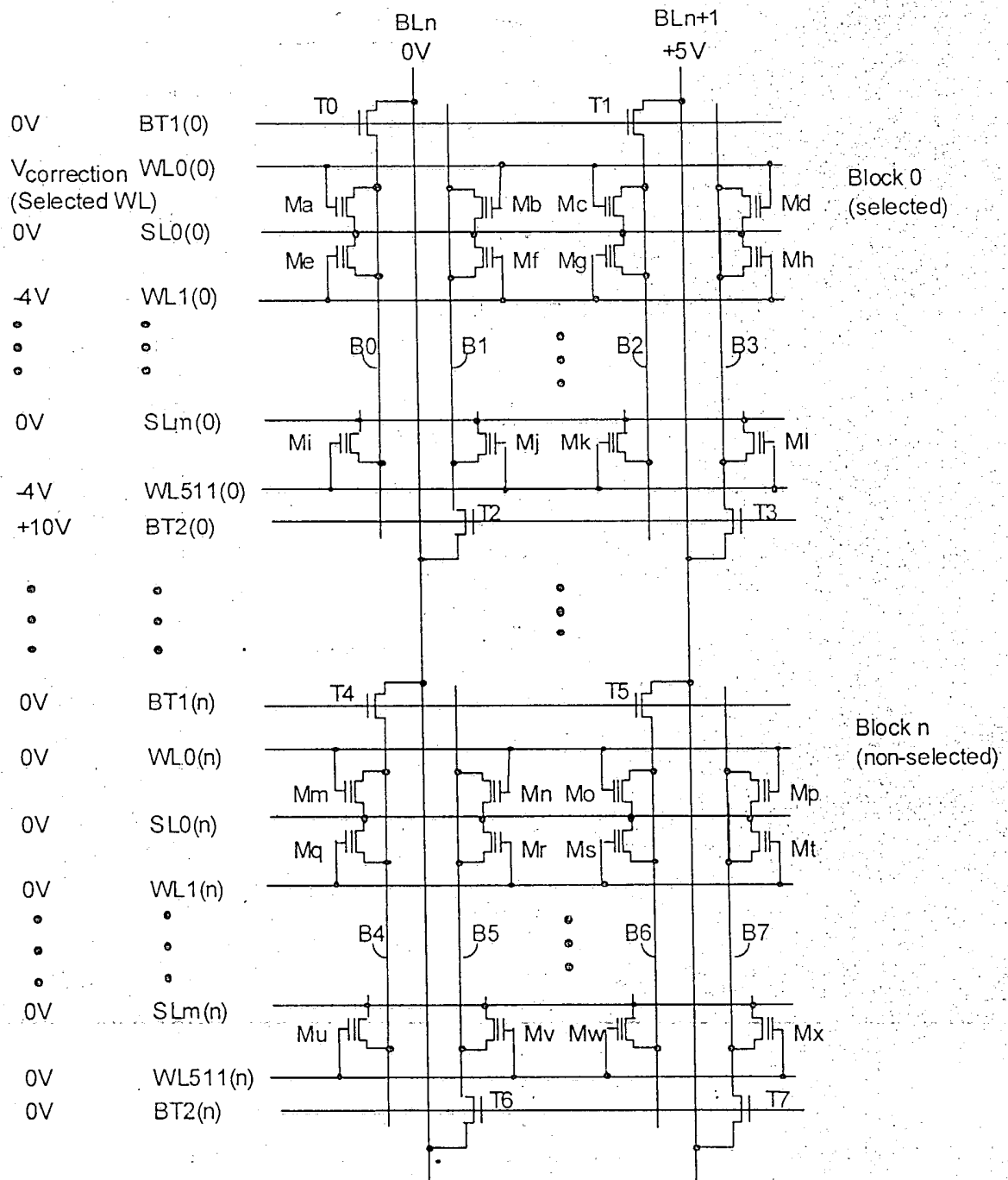


FIG. 12

Correction Verify Operations

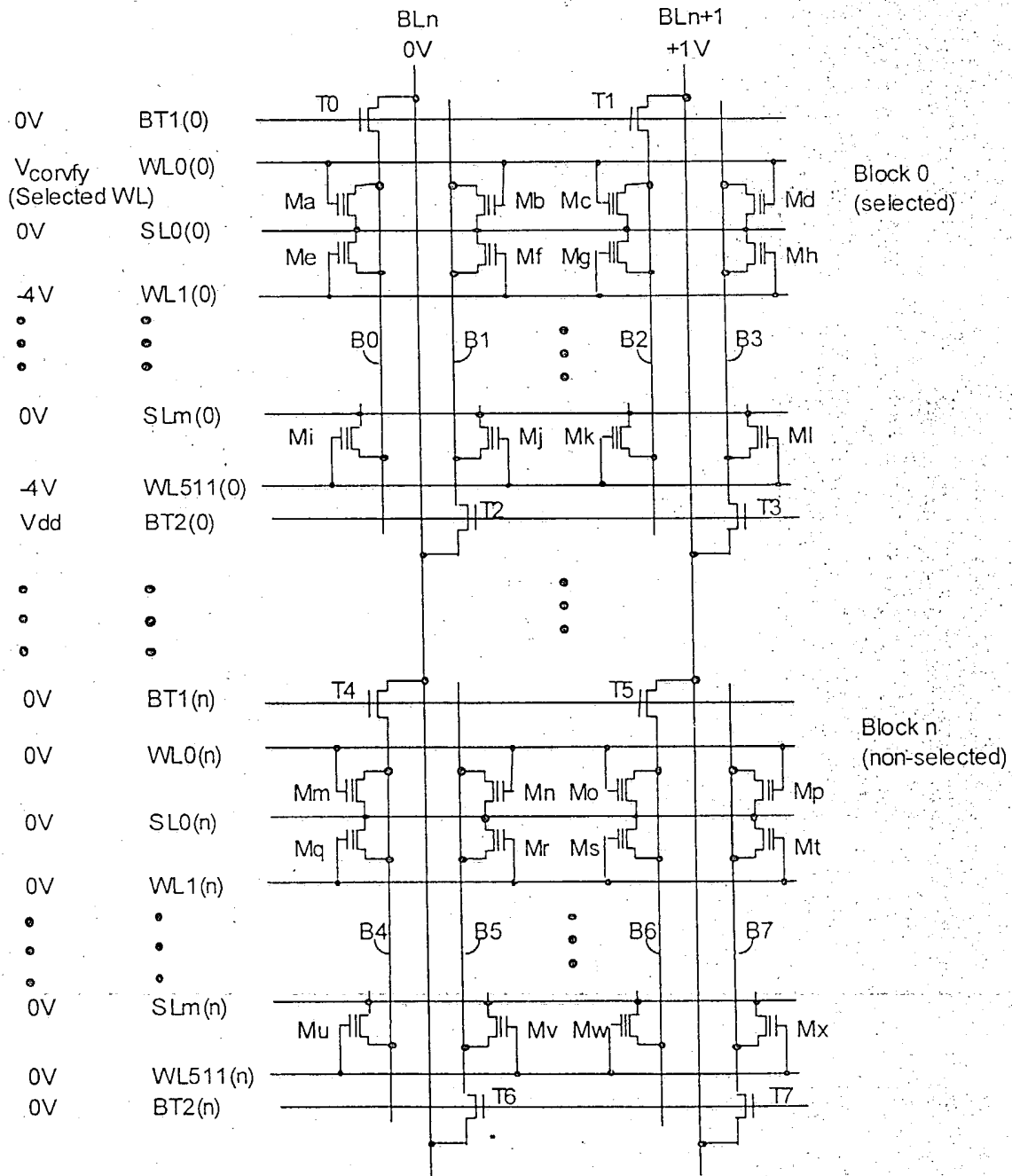


FIG. 13

Program Operations

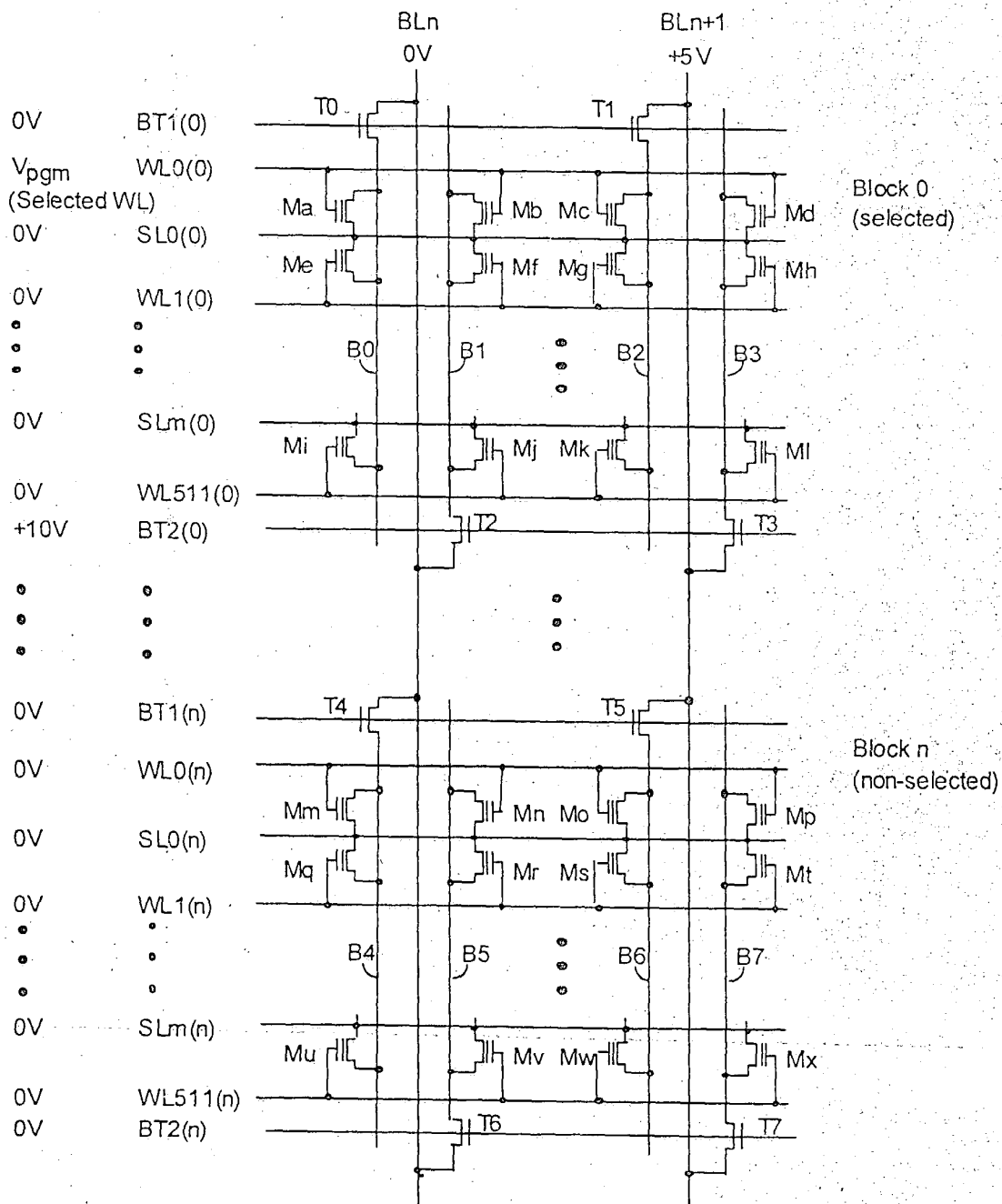


FIG. 14

Program Verify Operations

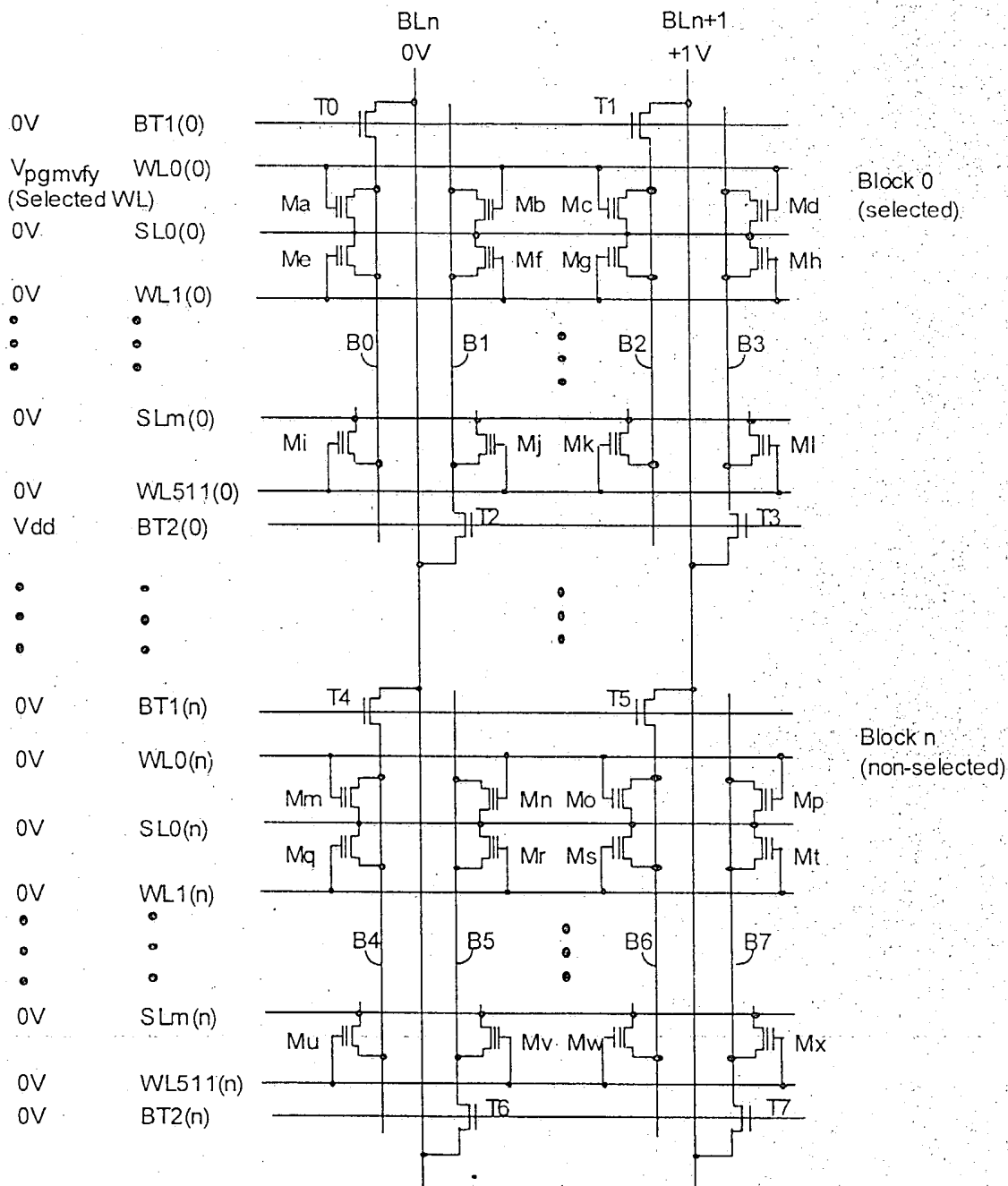


FIG. 15

Cell on a P-substrate for this invention

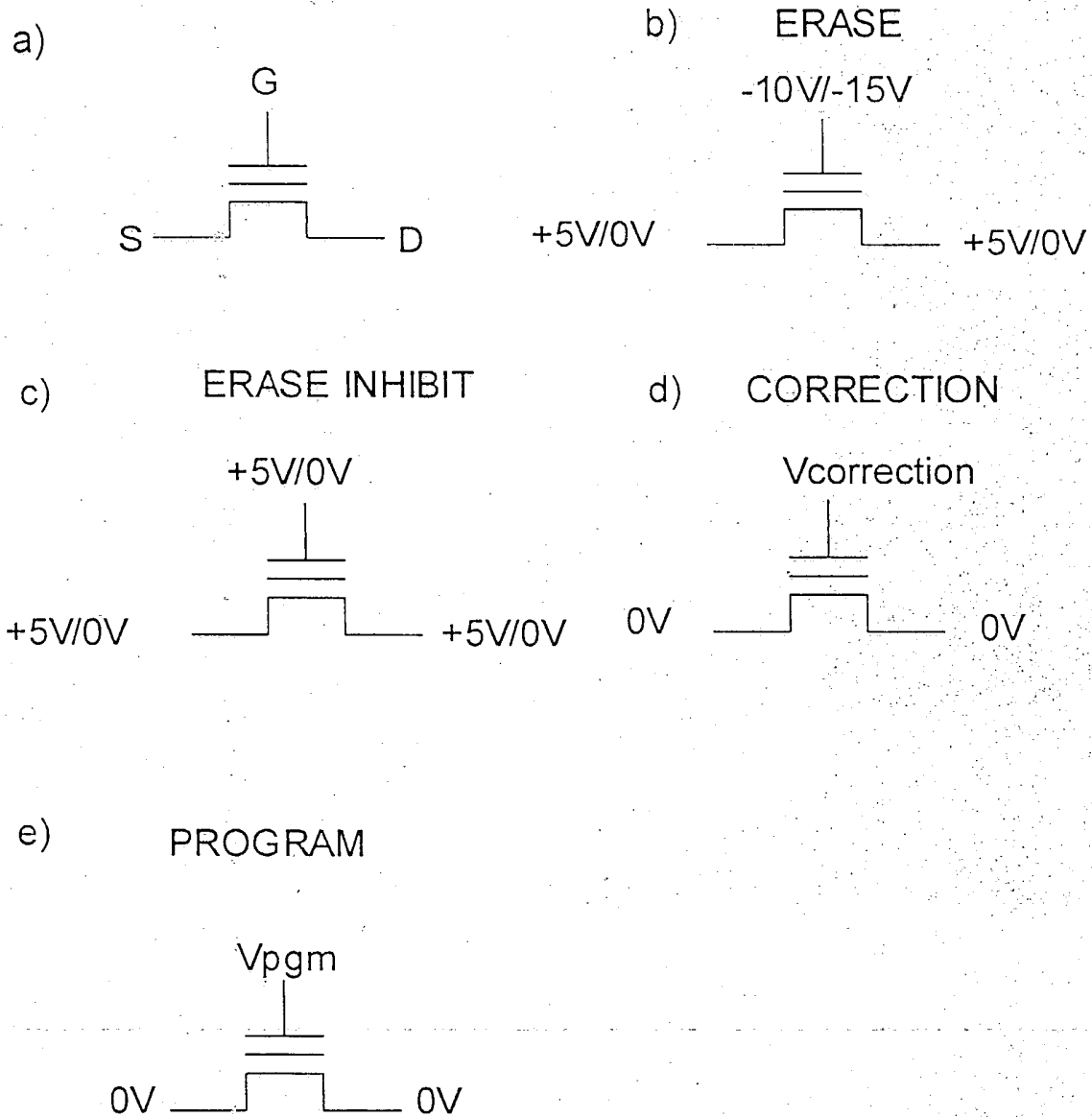
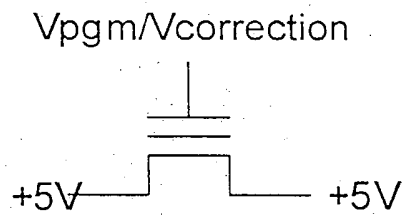


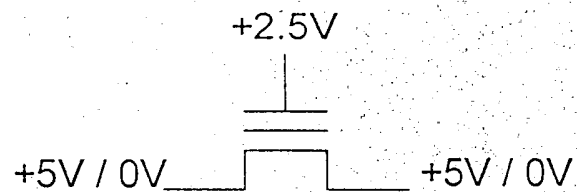
FIG. 16

Cell on a P-substrate for this invention

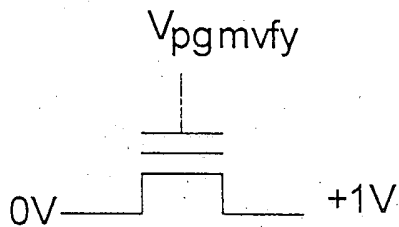
a) PROGRAM/CORRECTION
INHIBIT
(In same WL, in selected Block)



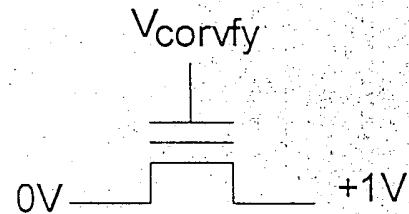
b) PROGRAM/CORRECTION
INHIBIT
(In different WL, in selected Block)



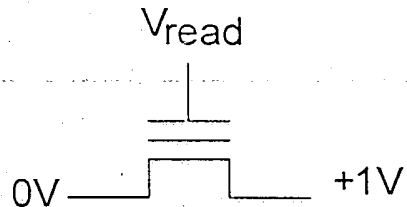
c) PROGRAM VERIFY



d) CORRECTION VERIFY



e) READ



f) ERASE VERIFY

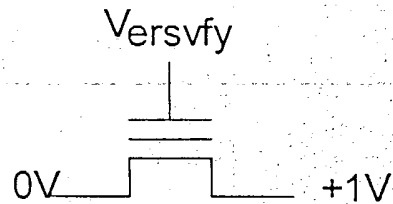


FIG. 17

AND Array on a P-substrate

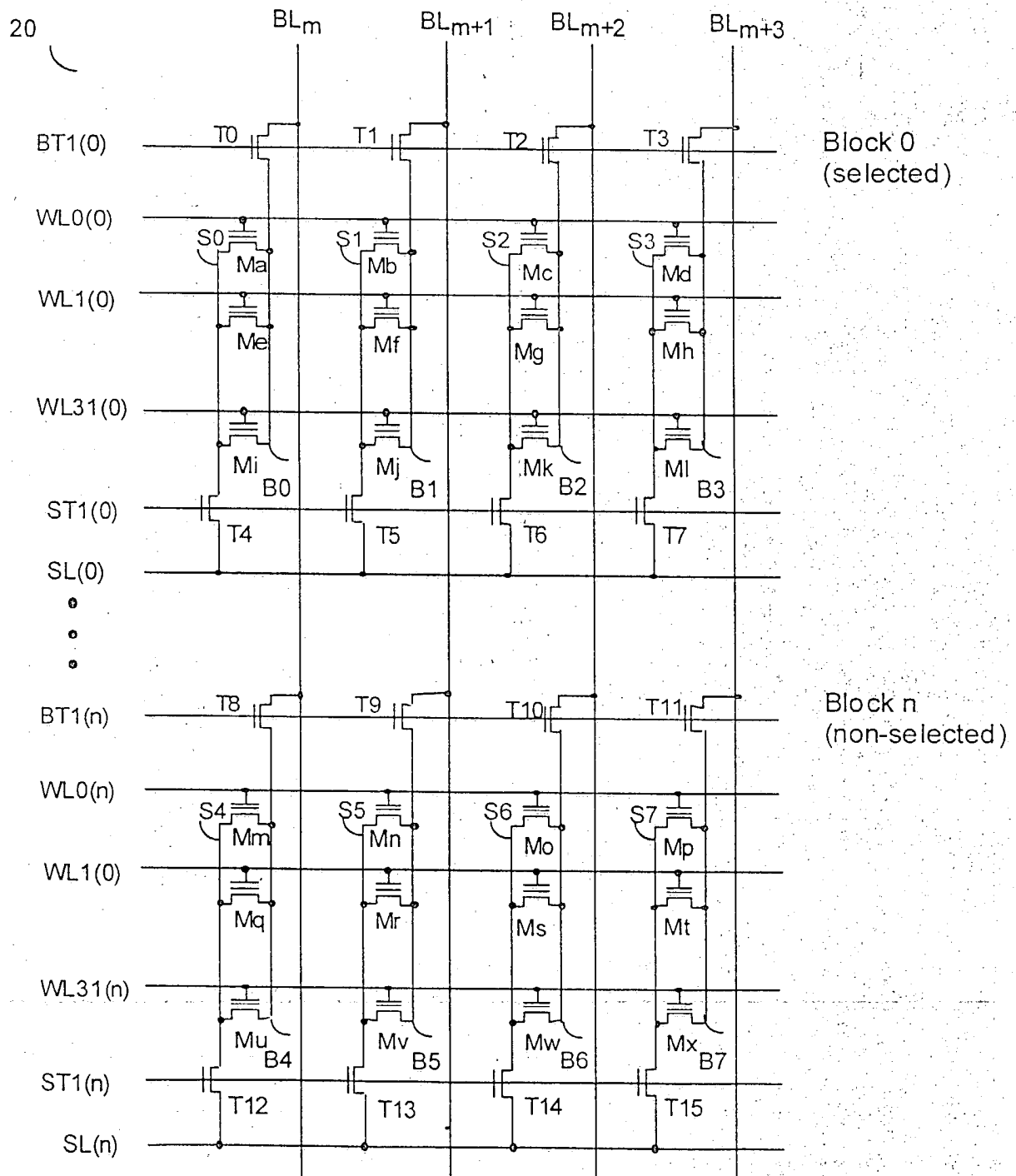


FIG. 18

Random Page Erase Operation

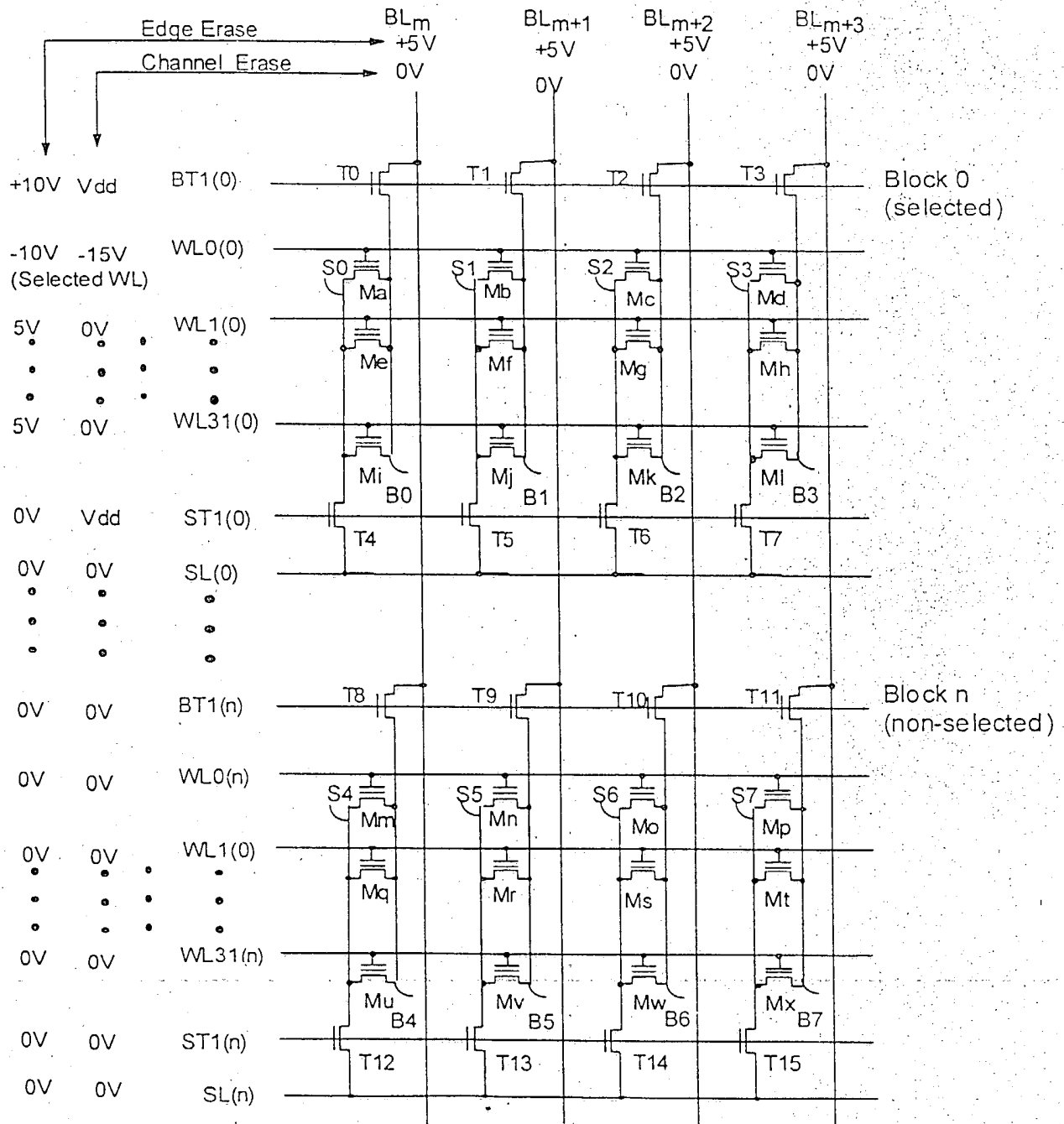


FIG.19

Random Page Erase Verify Operation

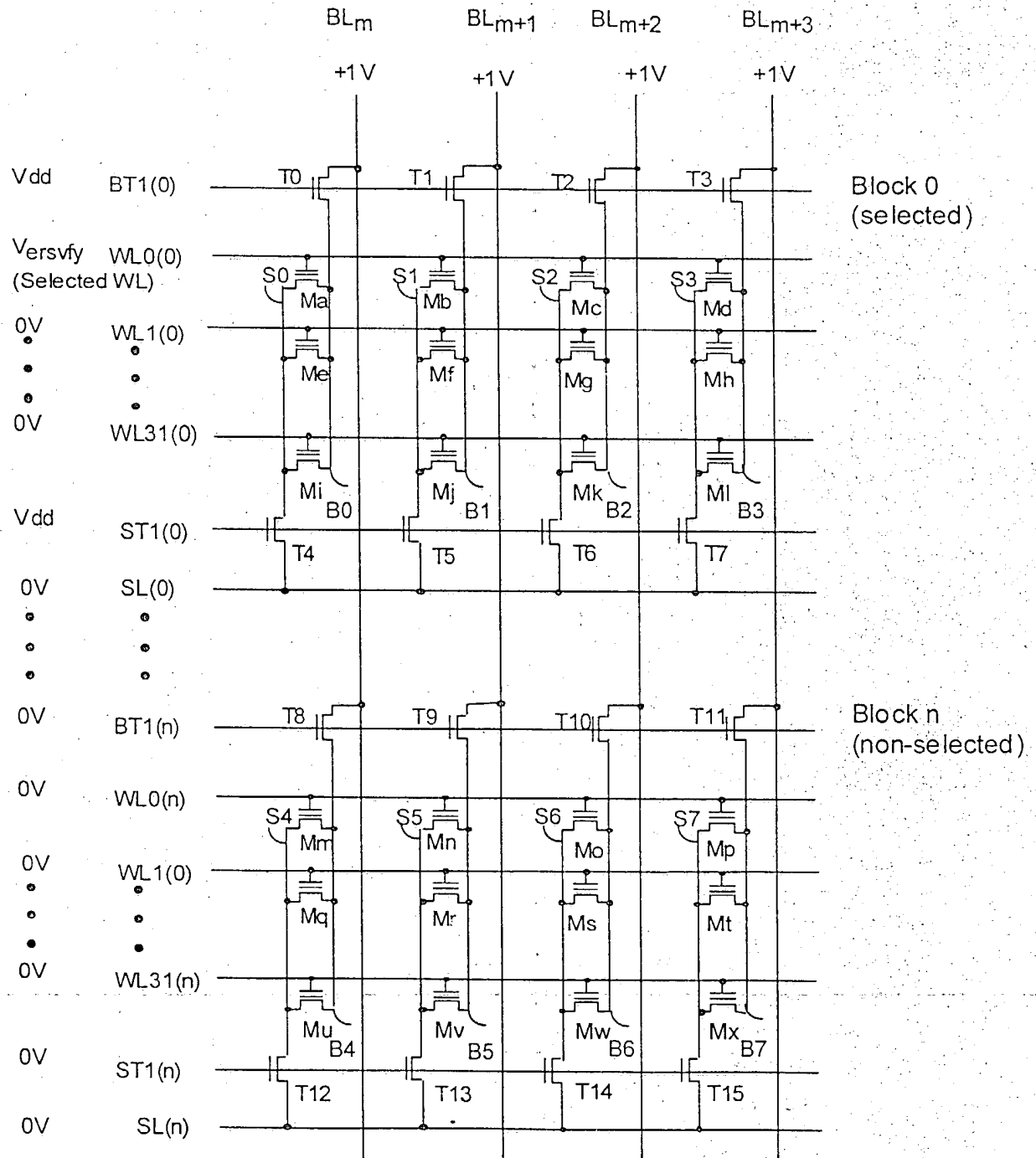


FIG. 20

Block Erase Operations

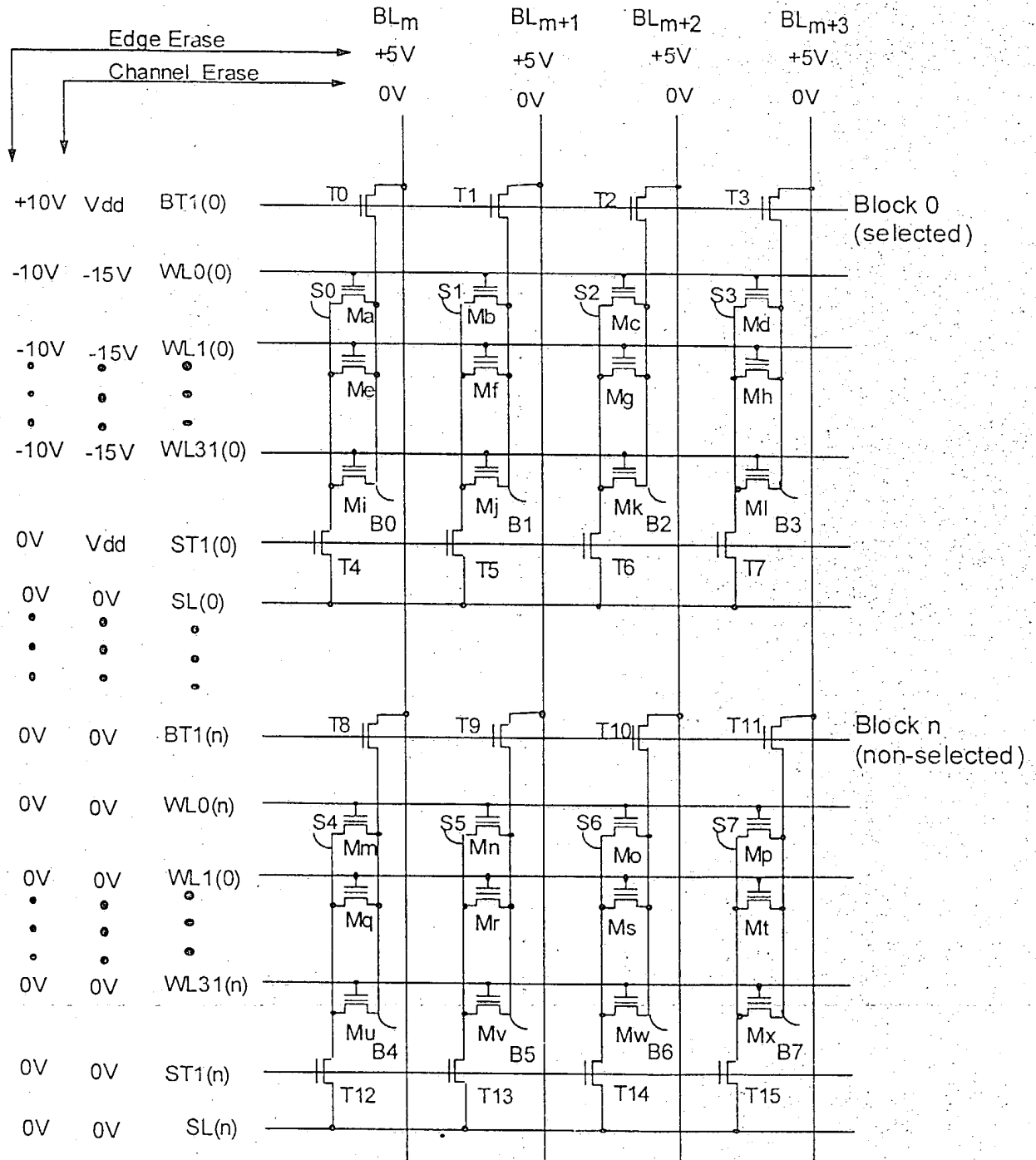


FIG.21

Block Erase Verify

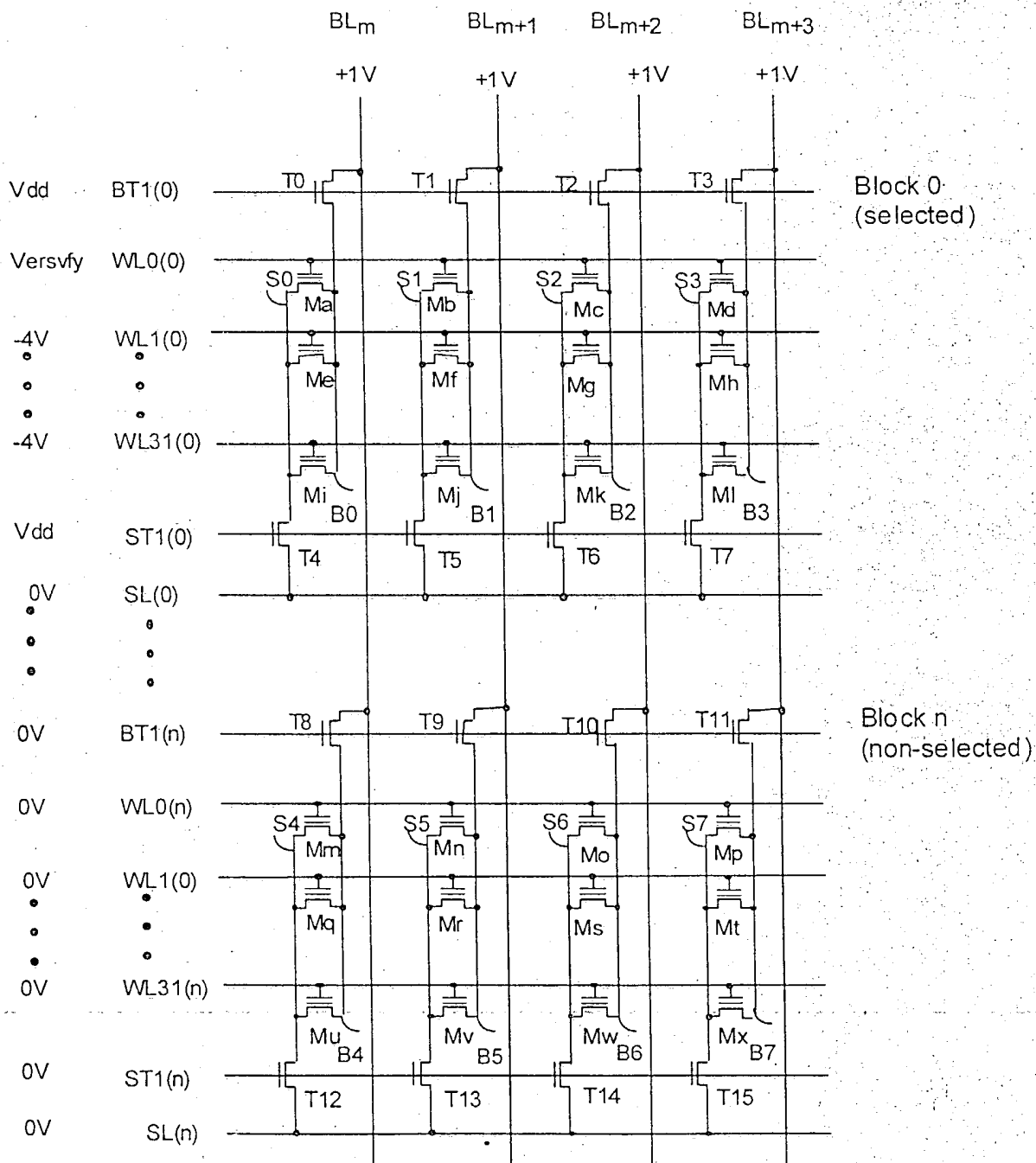


FIG. 22

Block Erase Inhibit

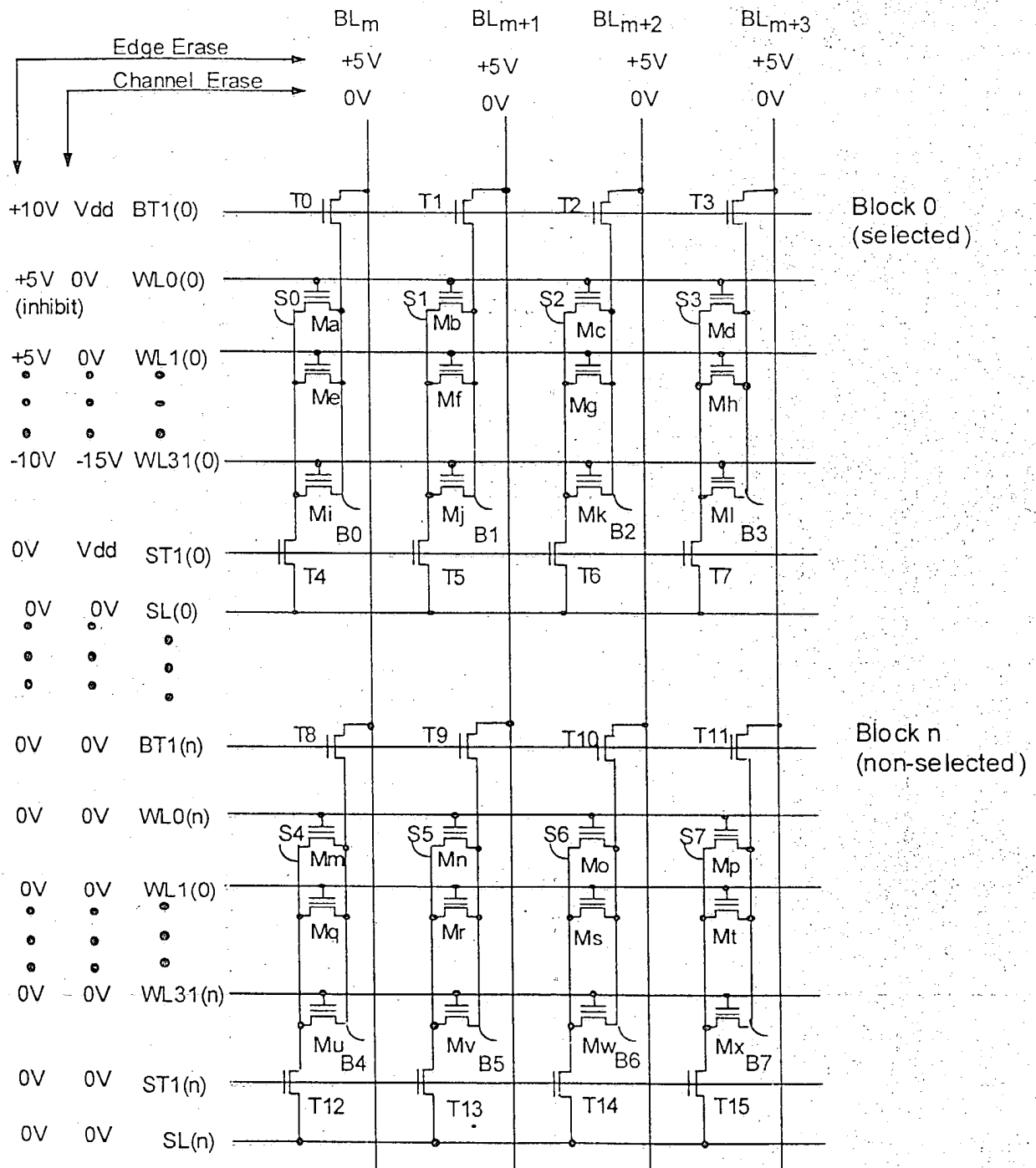


FIG. 23

Correction Operation

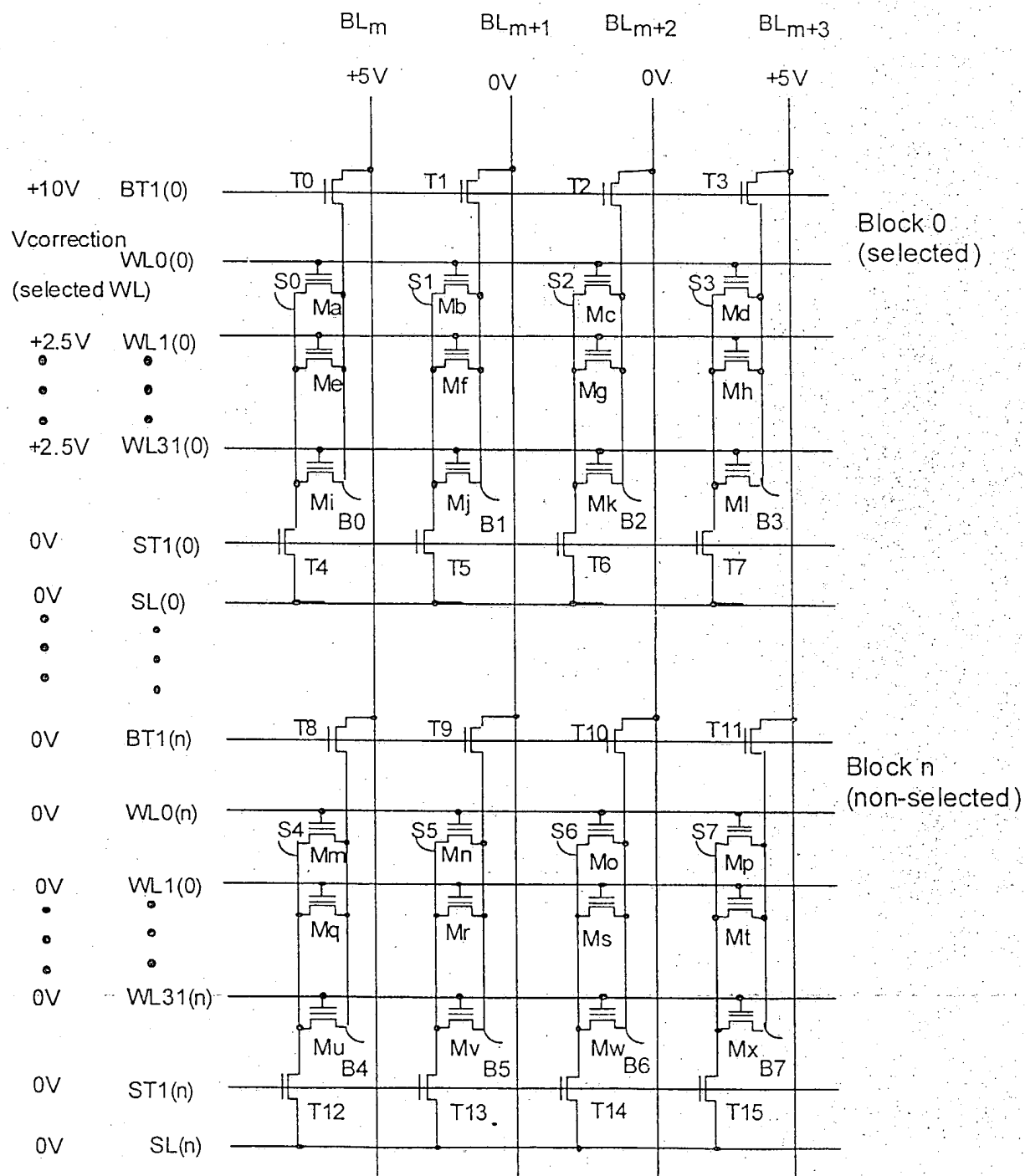


FIG. 24

Correction Verify

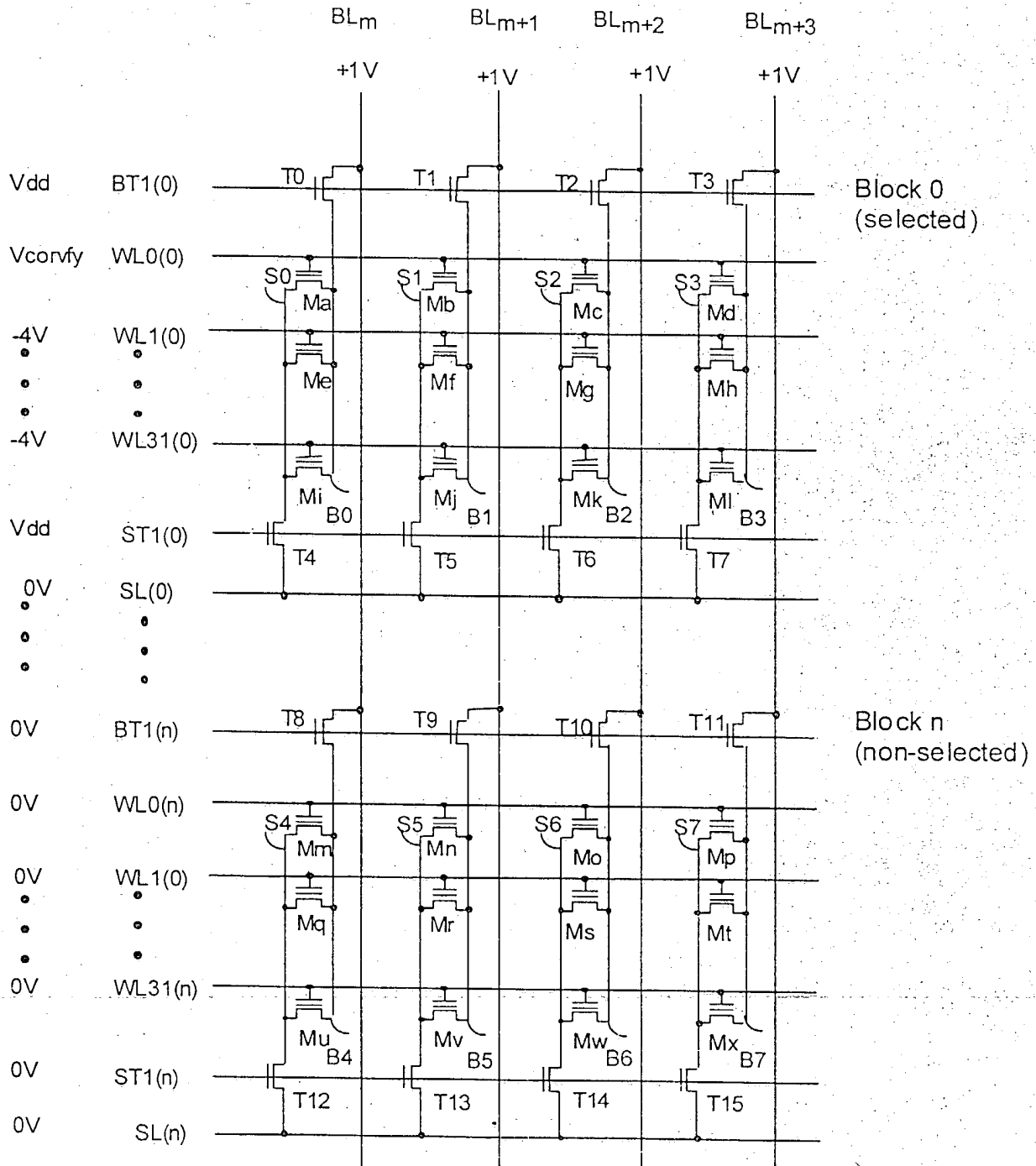


FIG. 25

Random Page Program Operation

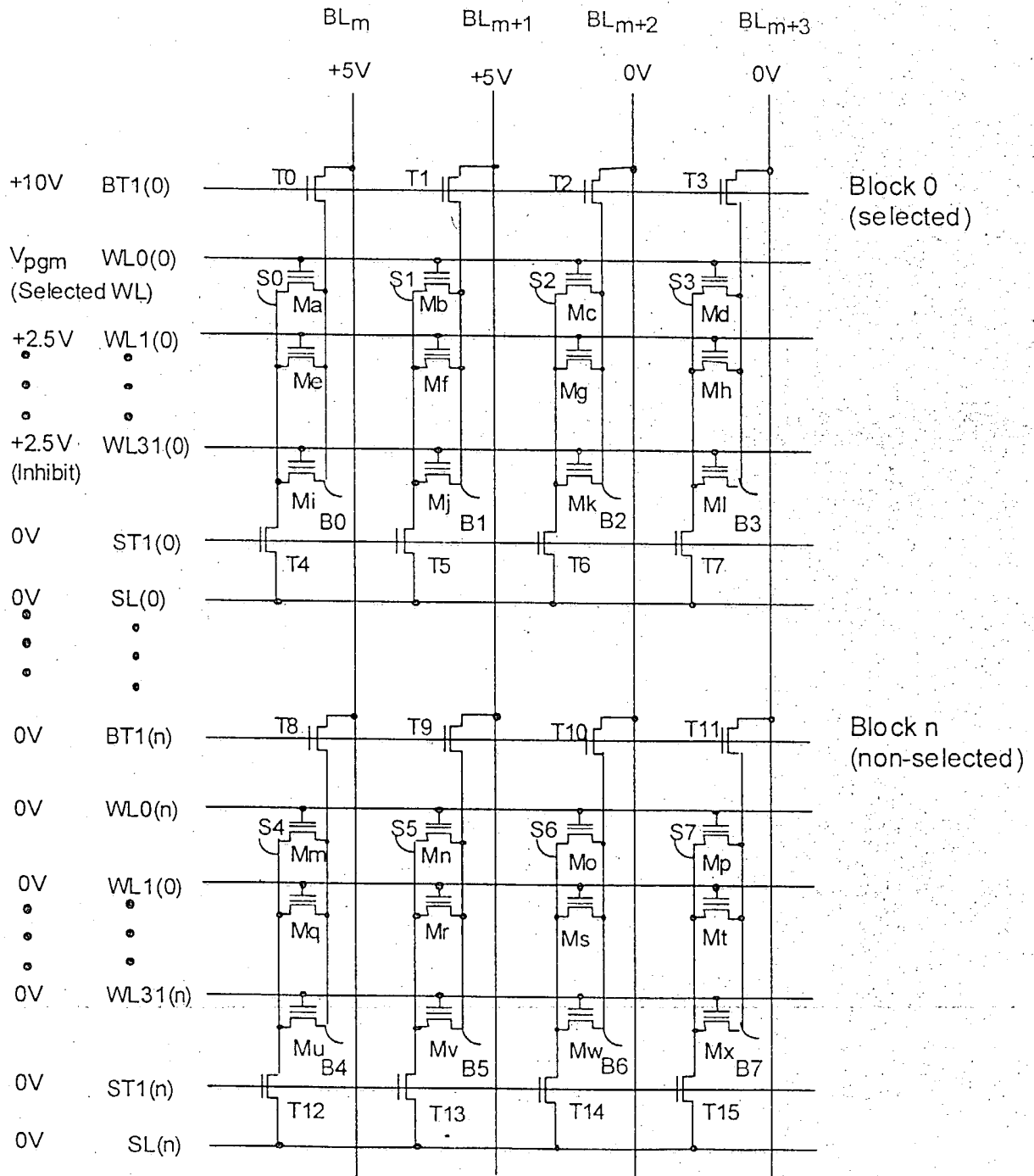


FIG. 26

Random Page Program Verify Operation

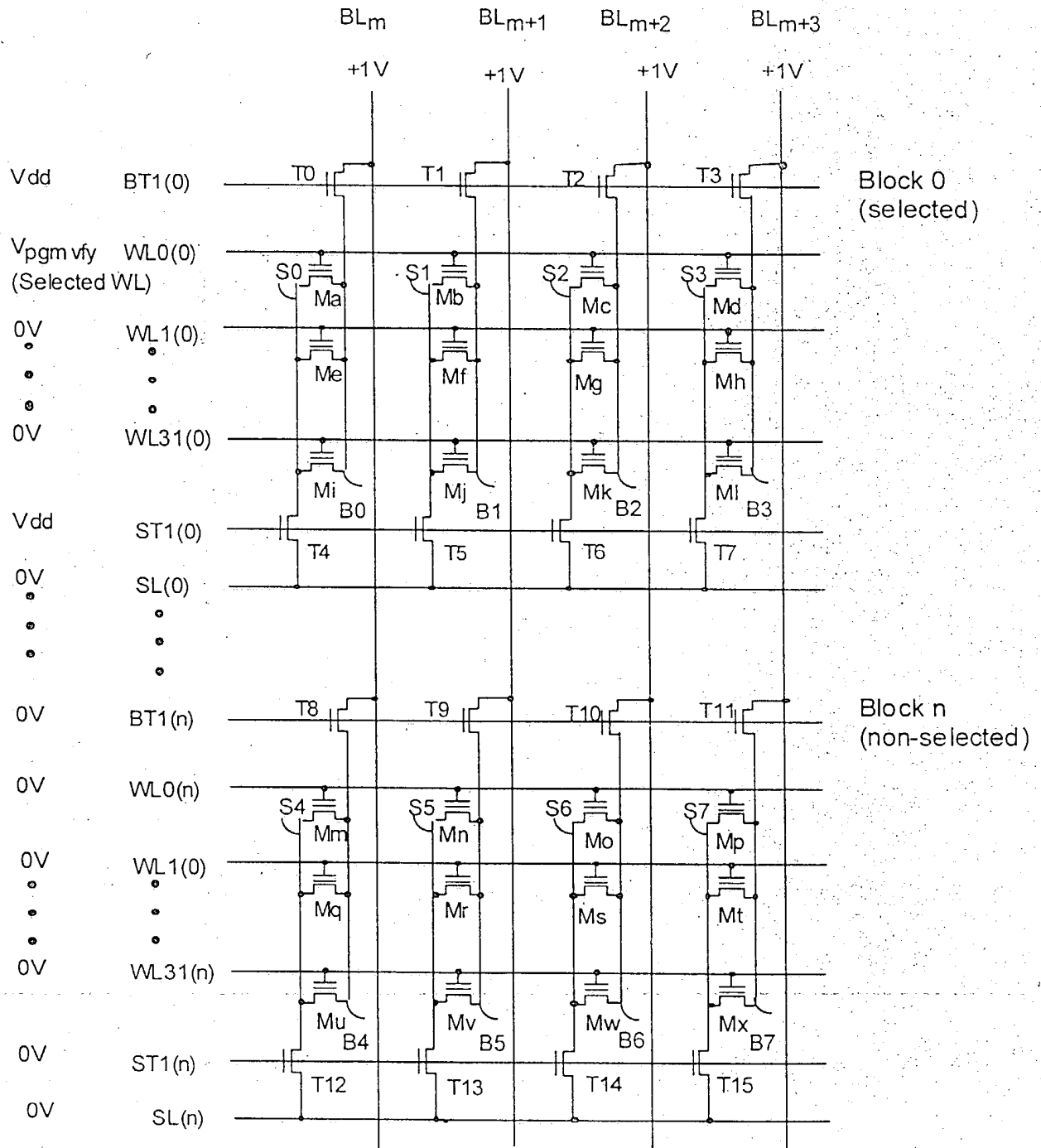


FIG. 27

ETOX NOR cell on a P-well

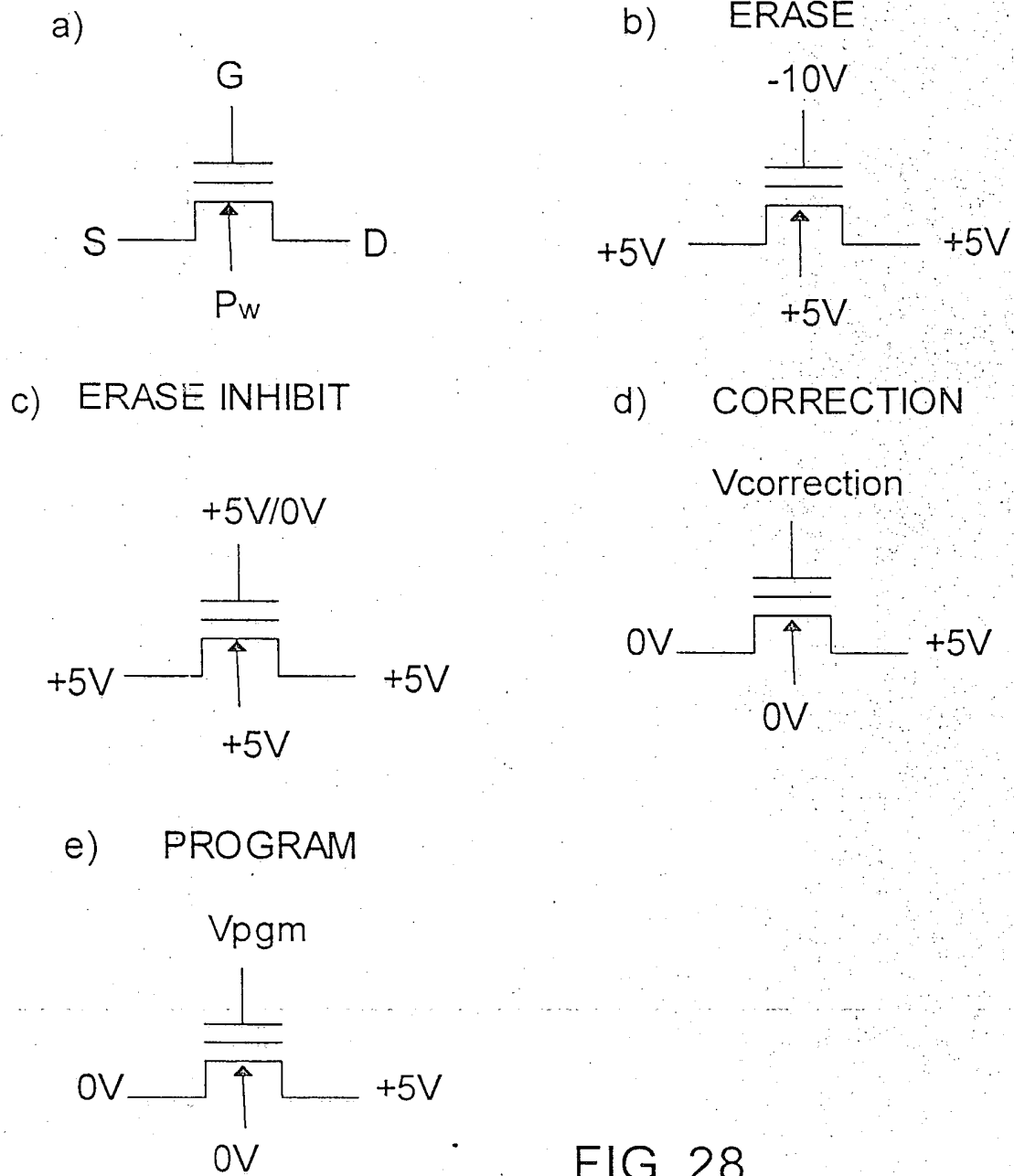
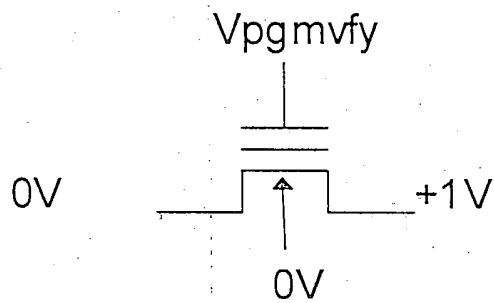


FIG. 28

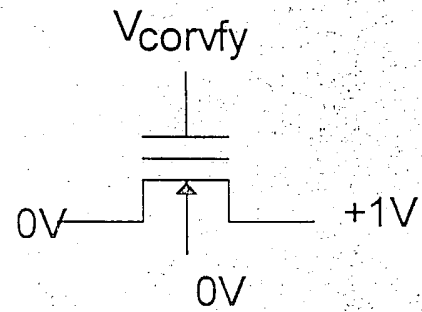
ETOX NOR cell on a P-well

a)



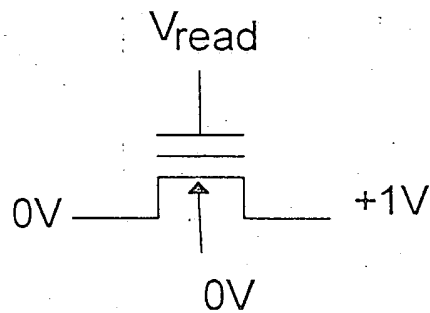
b)

CORRECTION VERIFY



c)

READ



d)

ERASE VERIFY

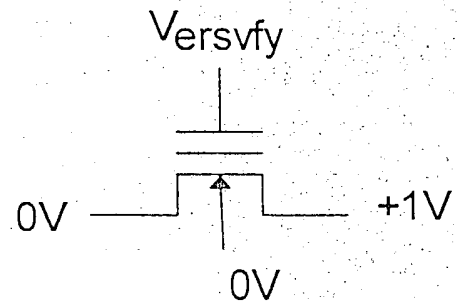


FIG. 29

ETOX NOR Array on a Pwell

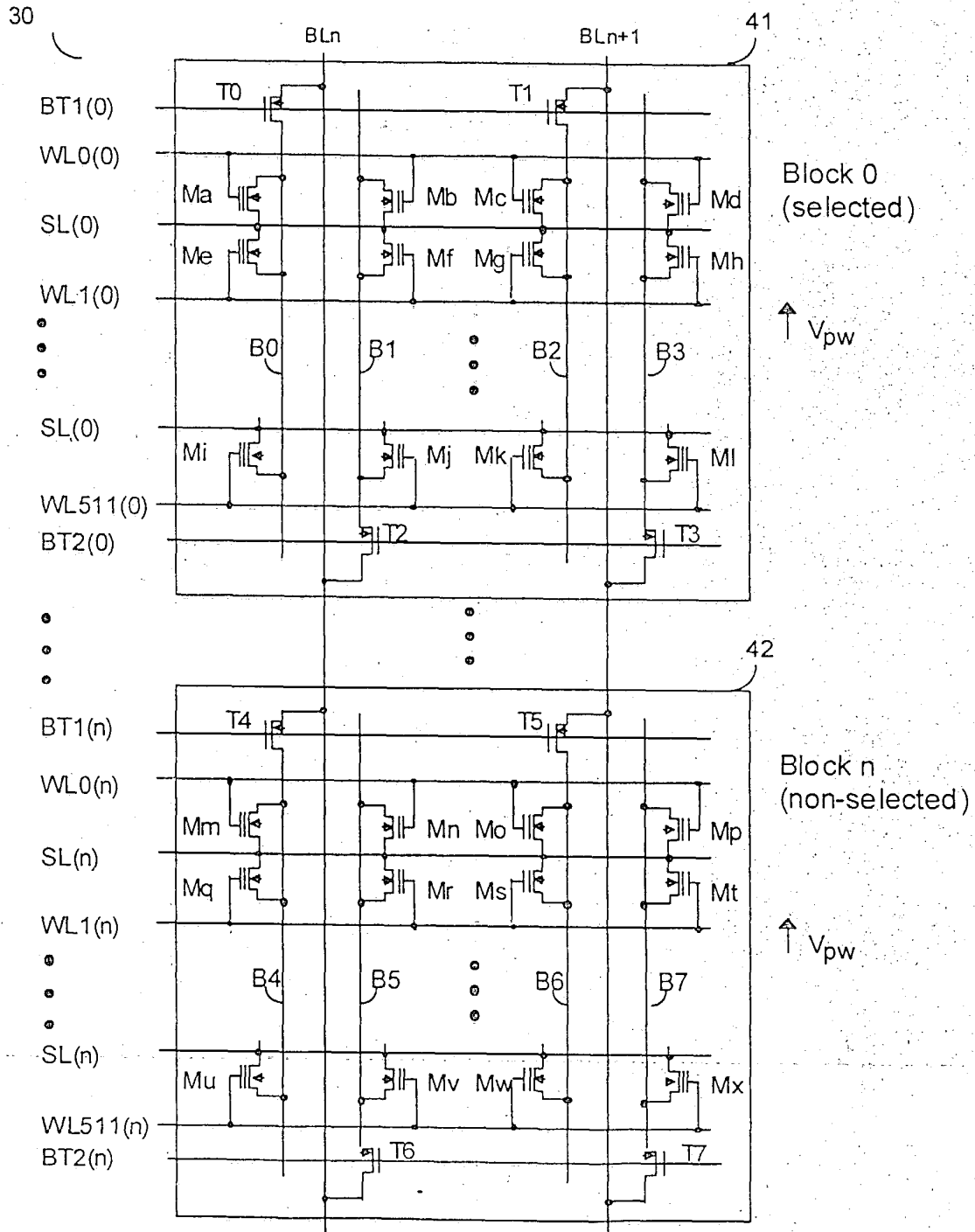


FIG. 30

Block Erase Operations

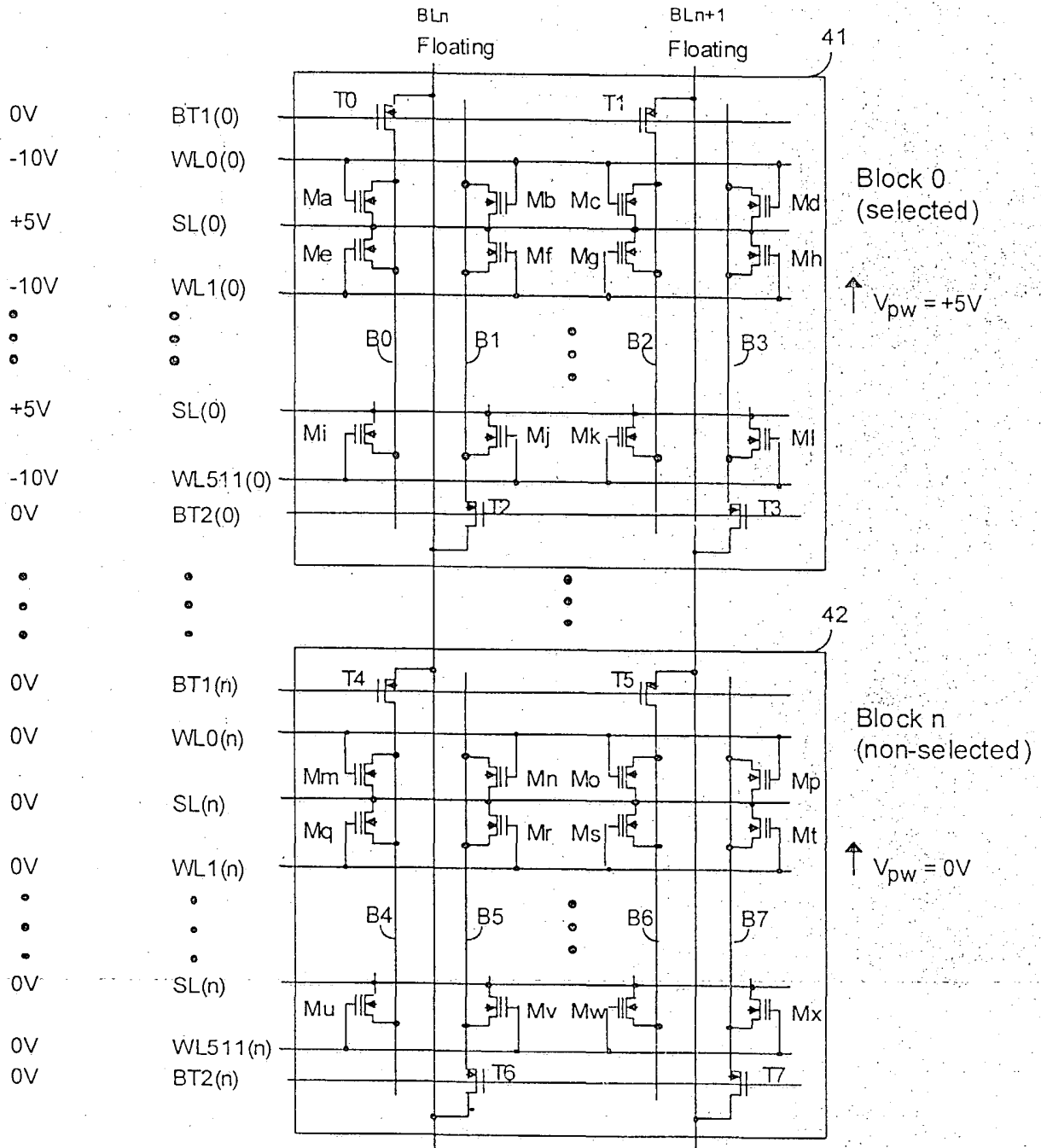


FIG. 31

Block Erase Verify

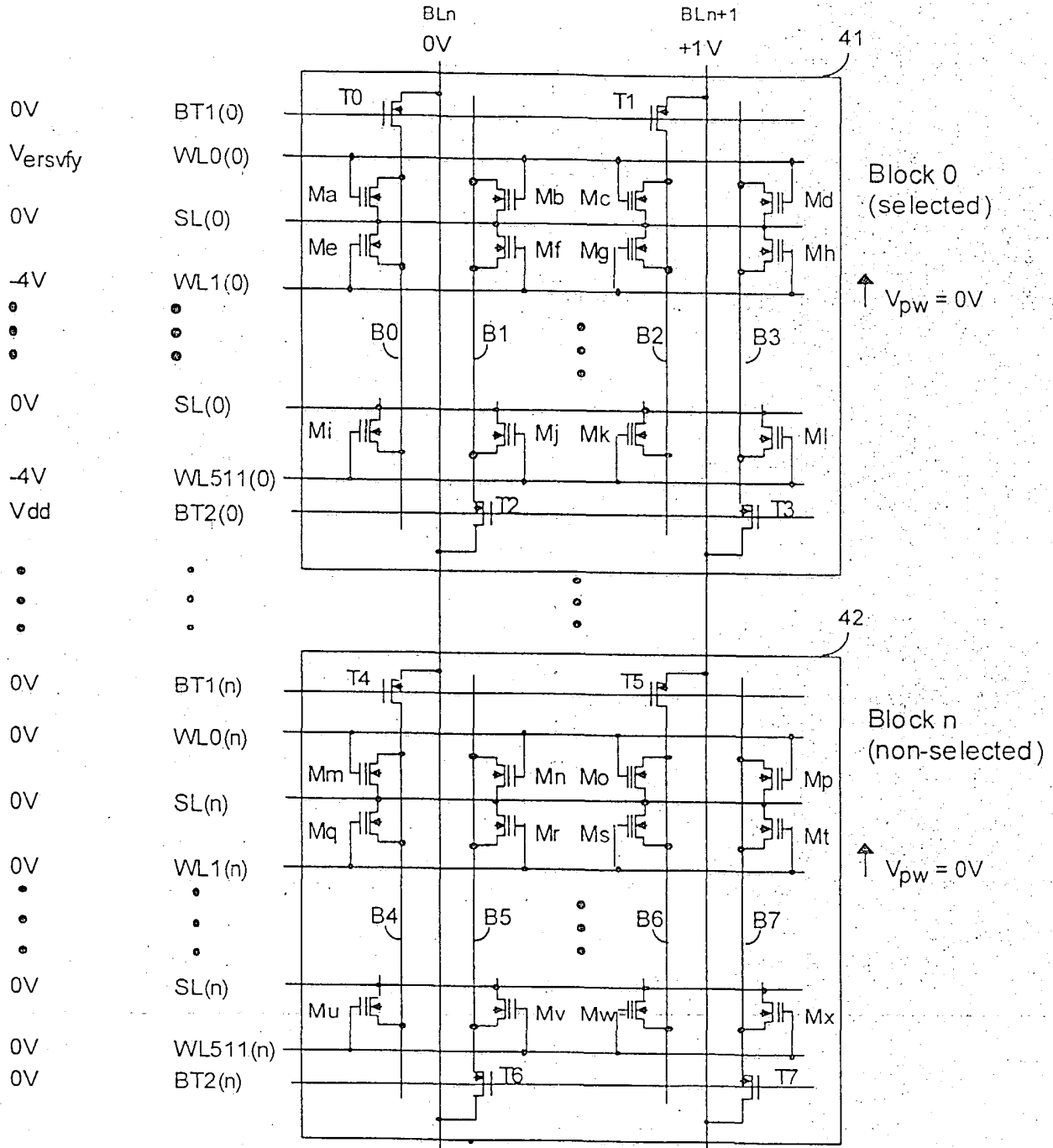


FIG. 32

Erase Inhibit

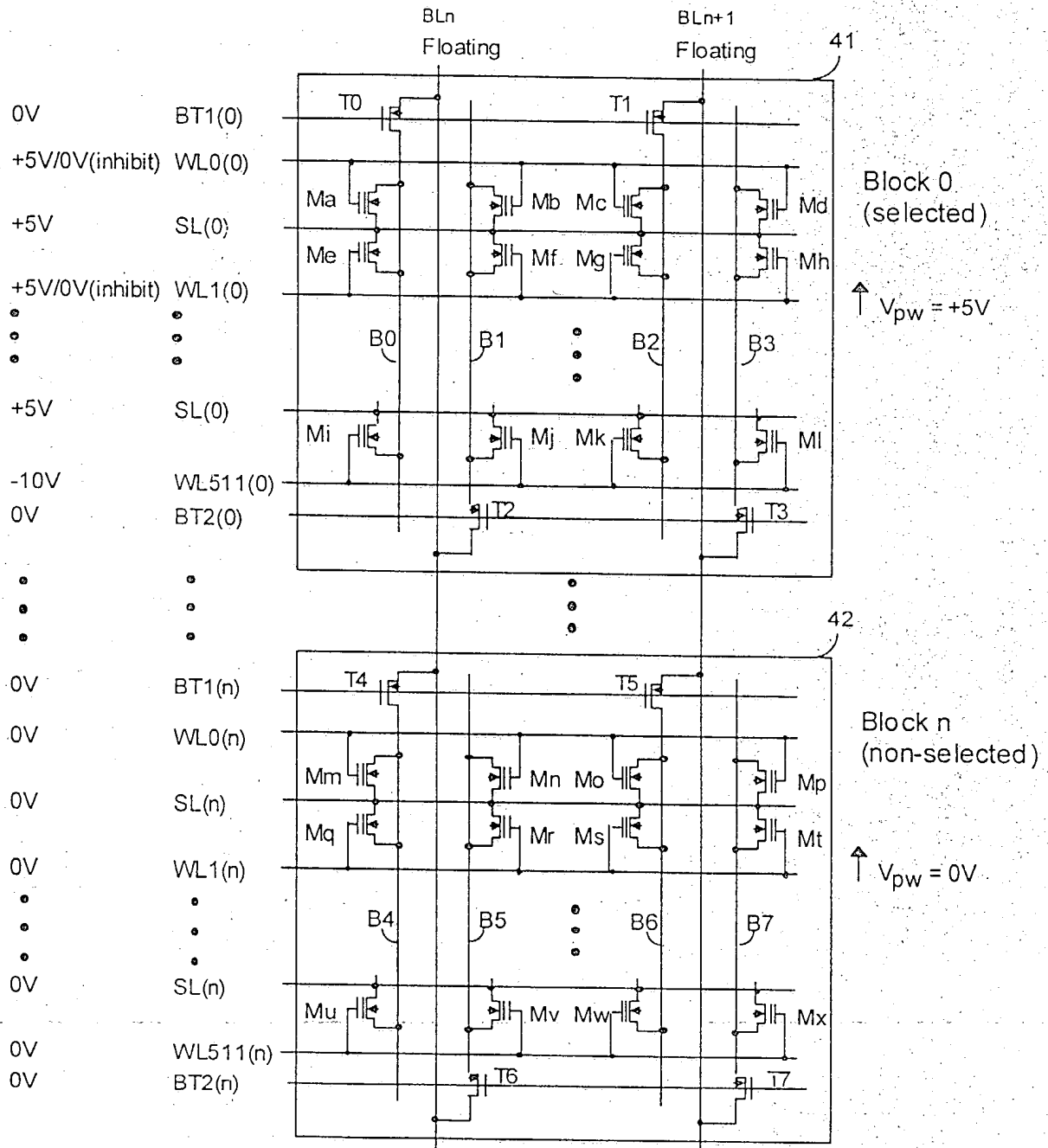
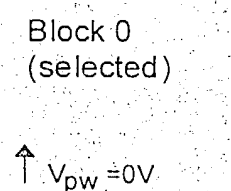


FIG. 33

BLn	BLn+1
0V	+5V



Block n
(non-selected)

Correction Verify Operations

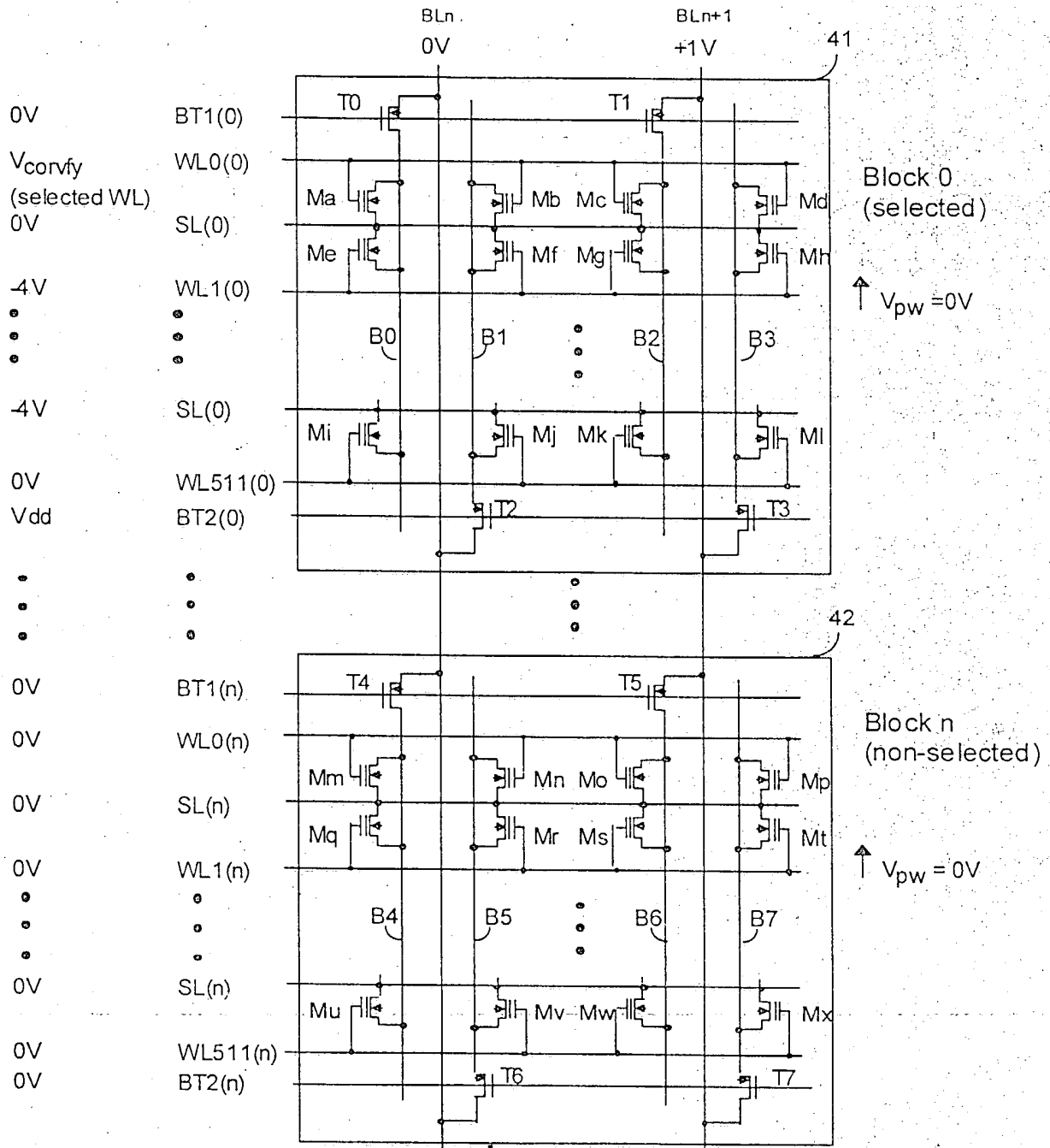


FIG.35

Program Operations

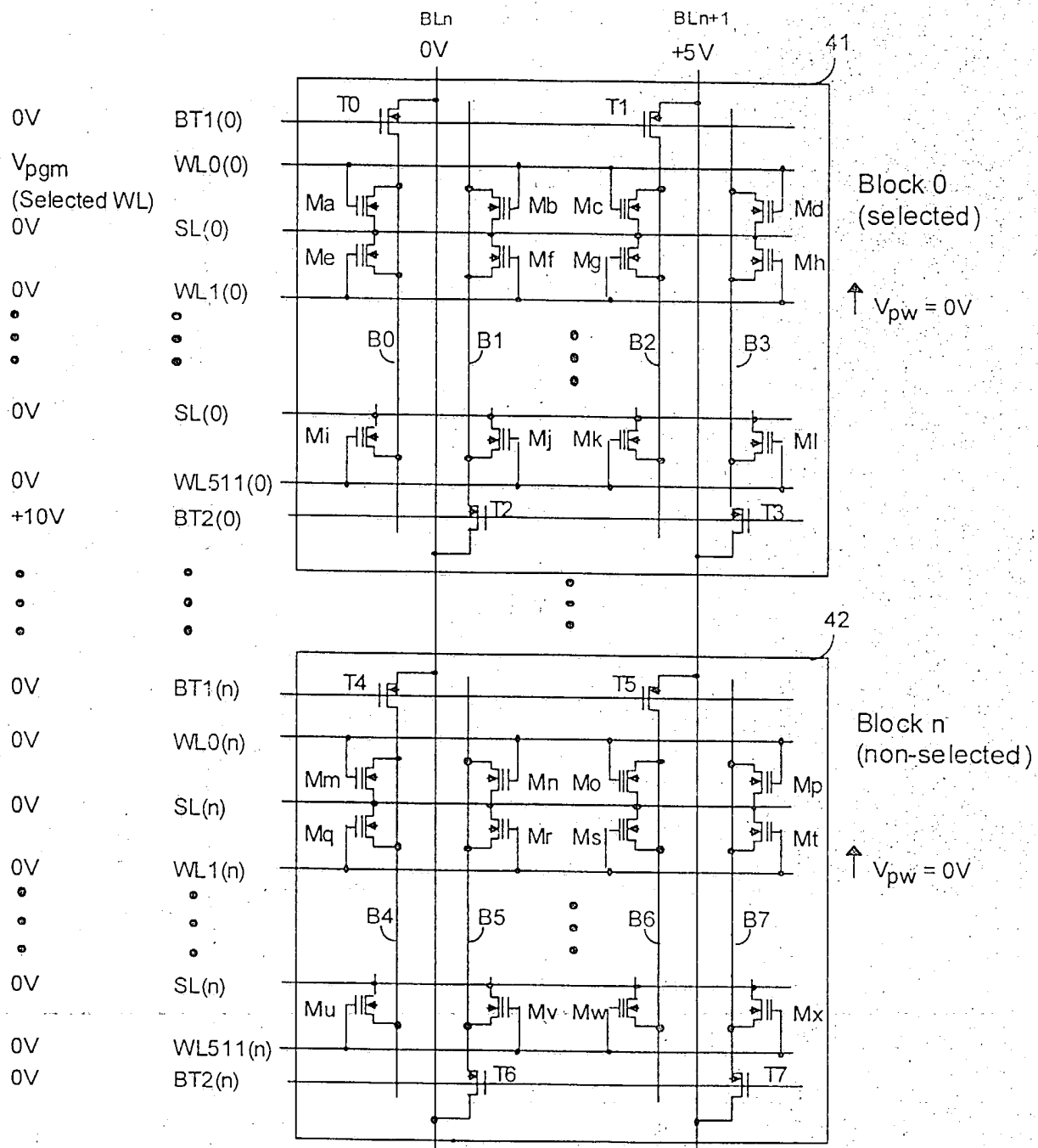
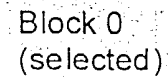


FIG. 36

BLn	BLn+1
0V	+1V



$\uparrow V_{pw} = 0V$

Block n
(non-selected)

$\uparrow V_{pw} = 0V$

FIG. 37

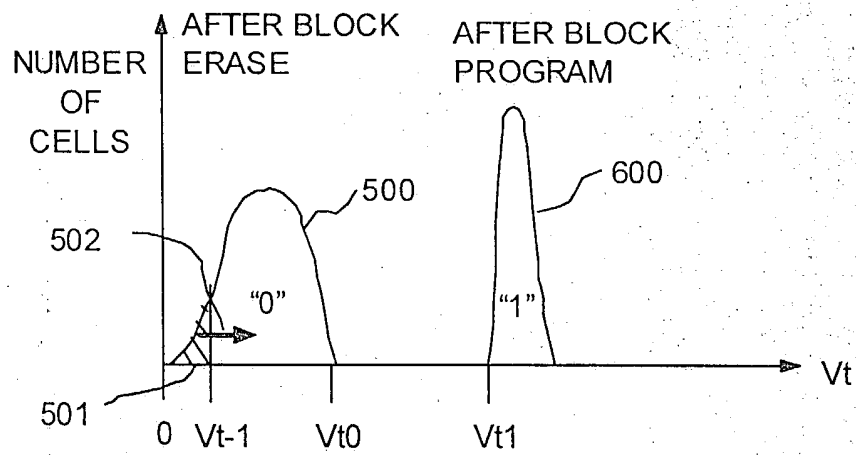


FIG.38a (Prior Art)

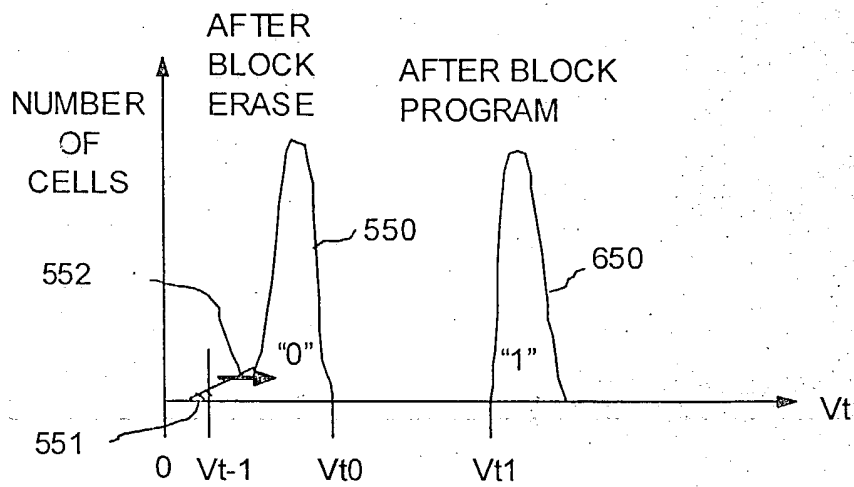


FIG.38b

BLOCK ERASE OPERATION

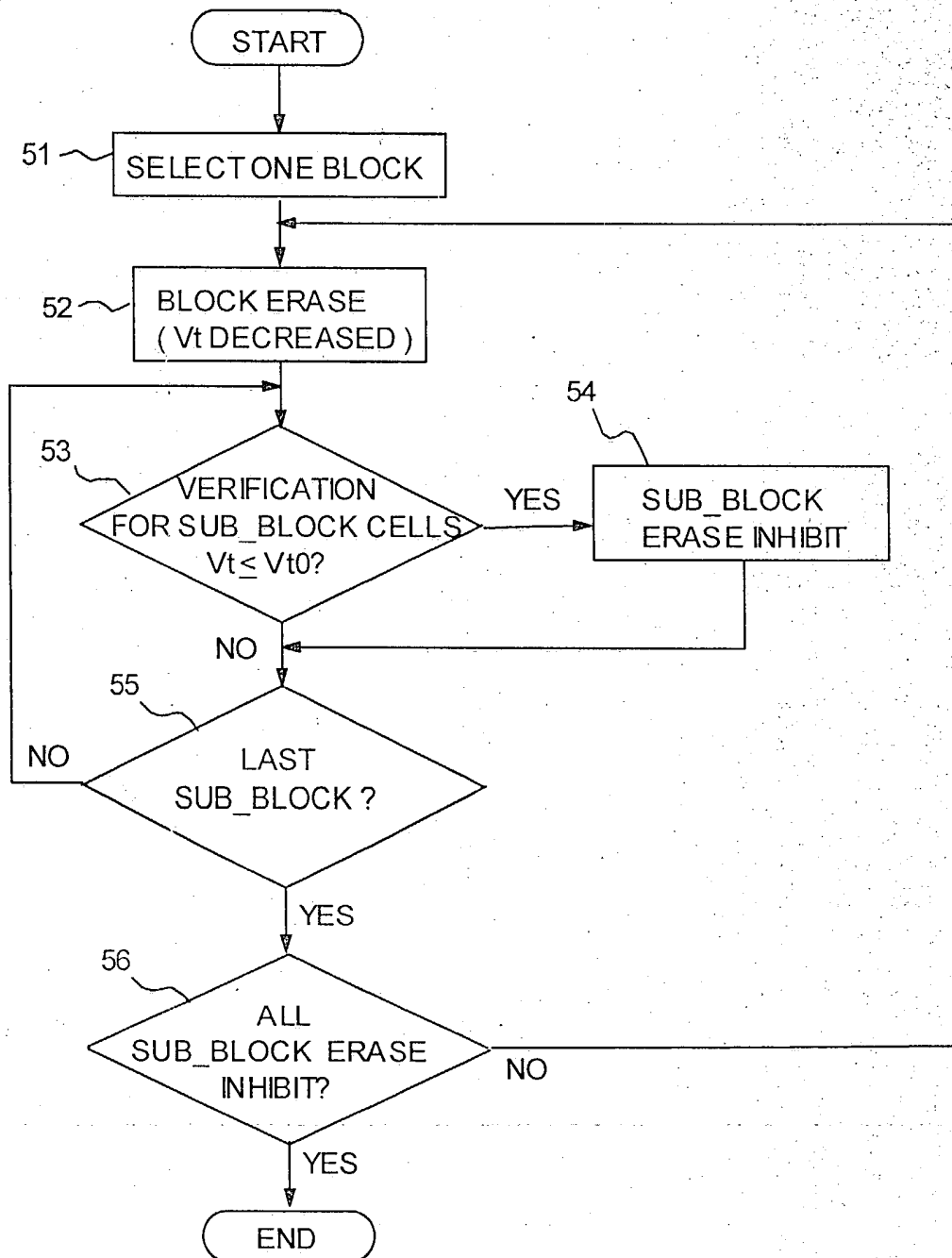


FIG. 39

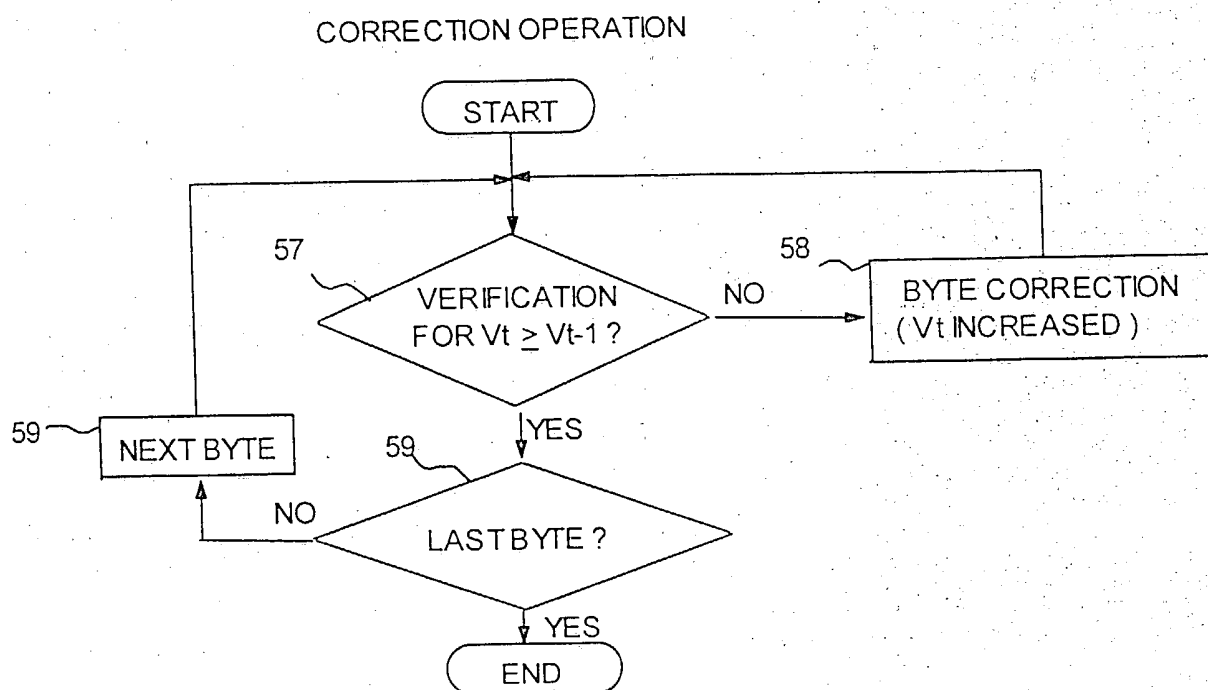


FIG. 40

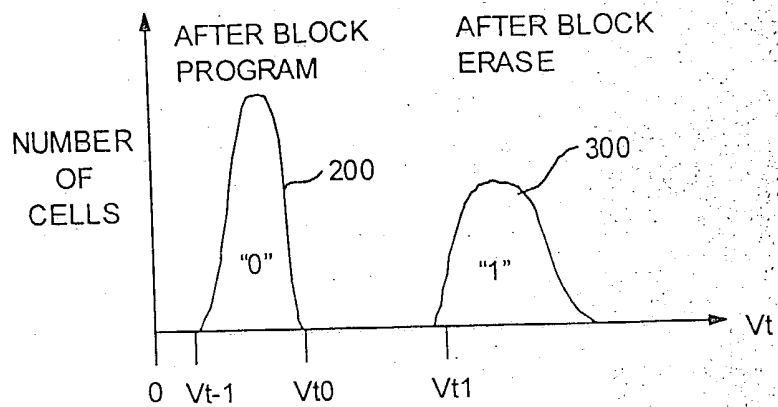


FIG. 41a (Prior Art)

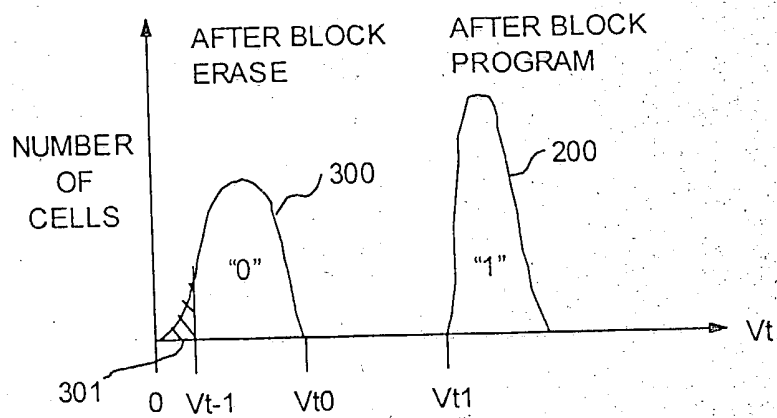


FIG. 41b (Prior Art)

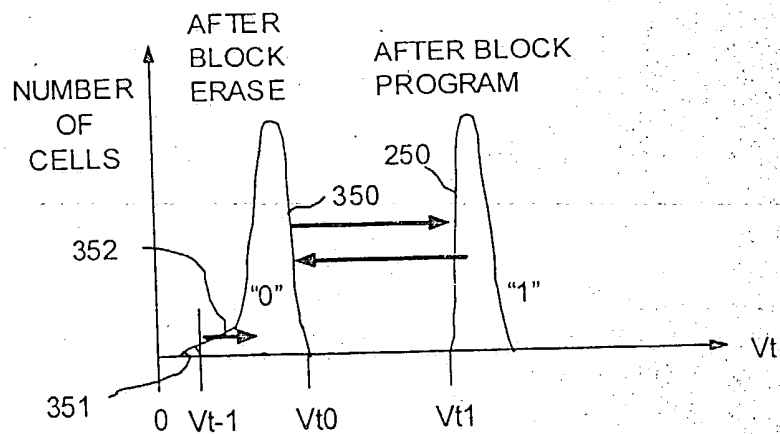


FIG. 41c

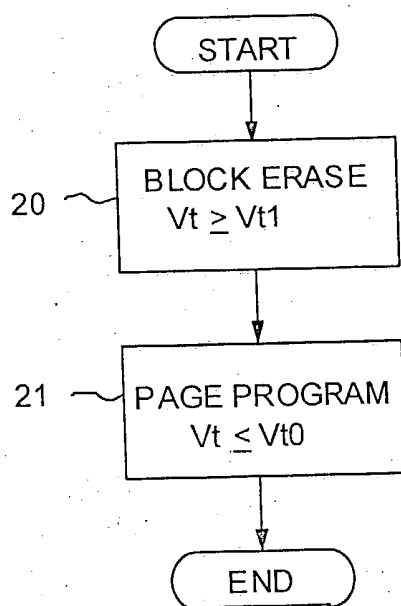


FIG.42a
(Prior Art)

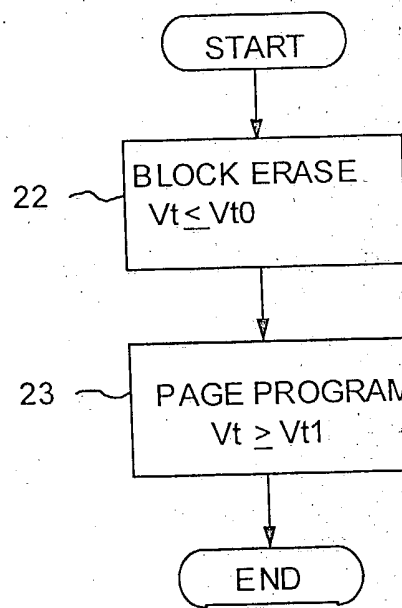


FIG.42b
(Prior Art)

BLOCK ERASE OPERATION

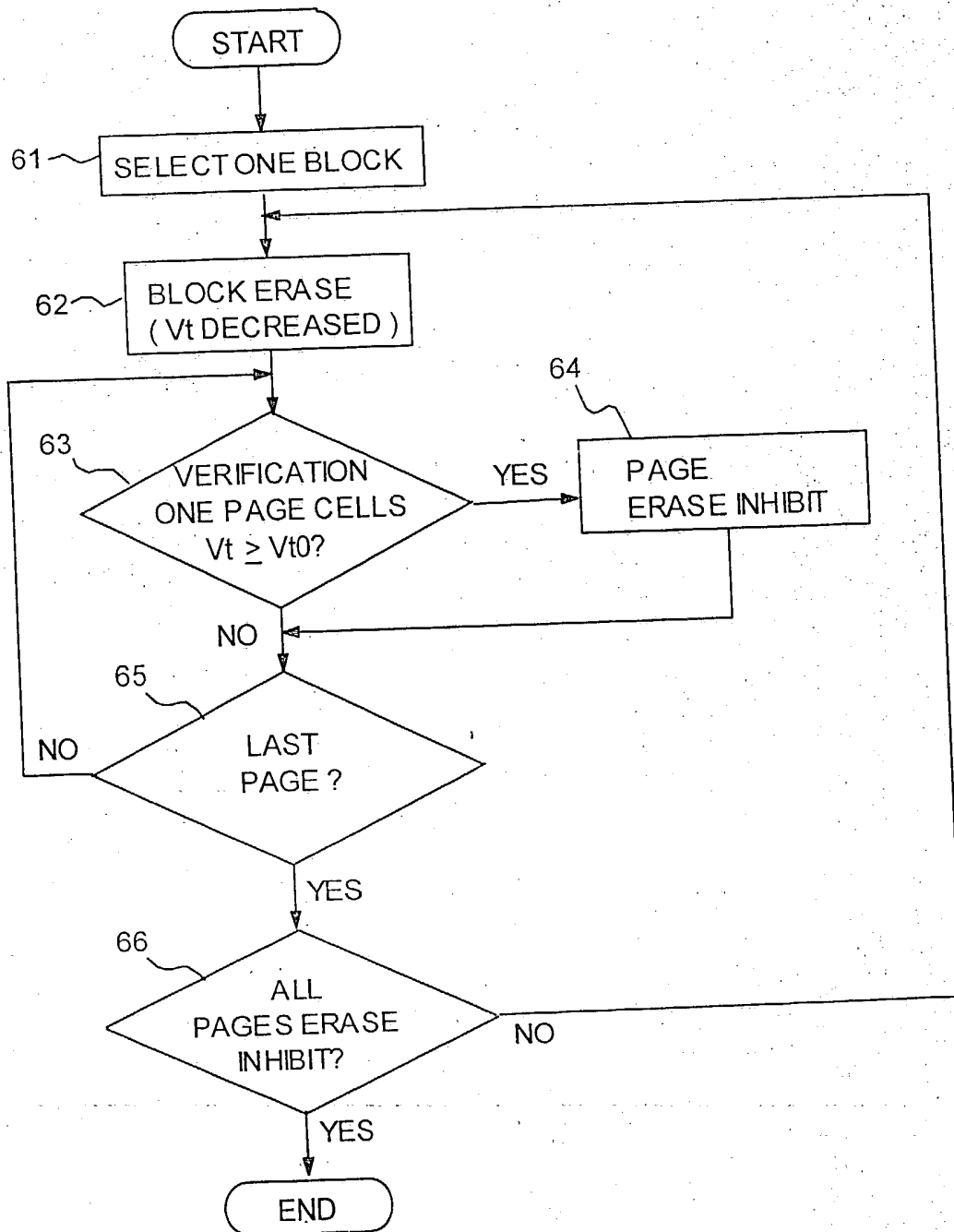


FIG. 43

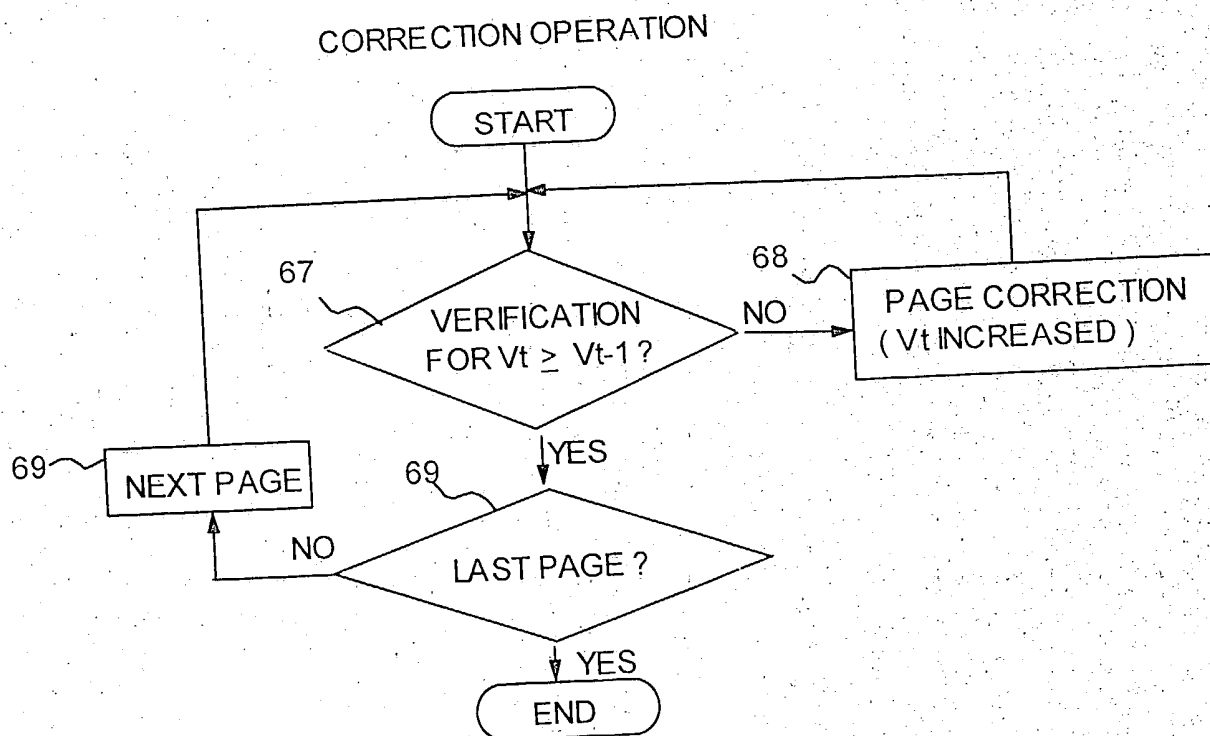


FIG. 44